CONSERVATION AND WATERSHED PROGRAMS

HEARINGS

BEFORE THE

COMMITTEE ON AGRICULTURE
HOUSE OF REPRESENTATIVES

EIGHTY-THIRD CONGRESS

FIRST SESSION

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SOIL CONSERVATION AND WATERSHED PROGRAMS

TUESDAY, APRIL 28, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10:05 a. m., in room 1310, House Office Building, Representative Clifford Hope (chairman) presiding.

Present: Representatives Hope (chairman), Andresen, Hoeven, Simpson, Dague, Harvey, Lovre, Belcher, McIntire, Golden, King, Wampler, Poage, Grant, Gathings, Albert, Wheeler, Thompson, Jones.

The CHAIRMAN. The committee will come to order.

I think all of you who are present are aware of the fact that these committee hearings have been called to review the general subject of conservation programs and see what has been accomplished—and a great deal has been accomplished; we all know that. Also to see what the failures have been, if any, and what we can do and should do to meet the problems that are still ahead of us.

We want to explore particularly the program that relates to watersheds in which some progress has been made and in which there is a great deal of interest throughout the country. In fact this is a matter on which I think the country generally is perhaps ahead of us here in Washington.

We want to explore all of those things. And we hope that as a result of these hearings, it will be possible for us to expand the program, accelerate it where it needs to be accelerated, and fit it in as far as possible with other natural-resource programs and with our agricultural programs generally.

The Chair has prepared a statement outlining some of the things that we hope to accomplish through these hearings. If there is no objection, the Chair would like to make that a part of the hearing, and open the hearings with that statement.

I will not read it at this time. If there is no objection, it will be placed in the record as the opening statement of these hearings.

(Statement of Hon. Clifford R. Hope, chairman of the Committee on Agriculture, at the opening of the hearing on soil conservation and watershed programs, is as follows:)

STATEMENT OF HON. CLIFFORD R. HOPE, CHAIRMAN OF THE COMMITTEE ON AGRICULTURE, AT THE OPENING OF THE HEARING ON SOIL CONSERVATION AND WATERSHED PROGRAMS

For many generations, at least as far back as the time of George Washington, individual American farmers and students of agriculture have recognized the value of using their land so as to preserve and maintain its fertility. For many years,

too, it has been recognized that, in addition to sound land use, certain protective measures and practices might be necessary to prevent the dissipation and destruction of the very topsoil itself through improper land use and resulting erosion.

As long as we had a frontier, however, as long as there were new lands to be brought into cultivation when old farms wore out or washed away, the urgency and importance of soil conservation was not apparent to the Nation as a whole.

Thus, it was not until 1928 that Congress first gave formal recognition to this problem and accepted, on the part of the Nation itself, some share of responsibility for preserving for the future the farmlands, ranges, and forests that combine to form our greatest natural resource. In the 1928 act making appropriations for the Department of Agriculture funds were appropriated, for the first time, specifically for research into soil erosion and methods of preventing it.

Since then our progress has been rapid. We have not only carried on research into the causes and prevention of erosion, but have enlisted millions of the Nation's farmers in active programs to put the results of this research into action.

Since the start of organized soil-conservation activities through the agencies of the Department of Agriculture, almost 2500 soil-conservation districts, organized under State laws, have come into existence. Eighty-four percent of the Nation's farm and ranch lands and 4 out of every 5 farmers and ranchers are now within a soil-conservation district. In 1952, accomplishments under the SCS program throughout the Nation were substantially greater in every line of activity than in any previous year.

During the same year, the Forest Service and the cooperative extension service were making available to farmers vital information that is making sound conservation practices a regular part of their farming operation.

In 1951, there were 2,357,000 farms, comprising more than 648 million acres, participating in the agricultural conservation program under the PMA.

In a little more than 20 years, our progress in organized conservation has indeed been impressive. But as we start now to reappraise this progress and consider it in terms of the need that lies ahead, I think we should focus our attention on the reverse side of the charts.

Four out of 5 farmers and ranchers live within soil conservation districts and yet only 1 out of every 5 is now actively participating in the SCS program as a cooperator.

The Extension Service, the Forest Service, and the State and Federal experiment stations have made available to farmers a wealth of information on how to make their farming and forestry operations more profitable to themselves by sound conservation management. But how many farmers today are getting the utmost in profit and productivity out of their soil and woodlands?

The agricultural conservation program has been in operation for many years. Through it farmers have received financial assistance in instituting conservation measures designed not only to prevent dissipation of the topsoil but to increase the productivity of their land. These programs have been designed to offer a positive inducement to farmers to institute sound conservation farming. So it is rather surprising to find that in 1951 only 43 percent of the Nation's farmers were taking advantage of the help offered by the agricultural conservation program, and that the farmland included comprised only 52 percent of the total.

What does this nonparticipation mean in terms of national welfare? Does it mean that we are not getting the conservation job done? Does it mean that our organized efforts must be accelerated, or made more attractive, or redirected? To what extent are those not participating in organized soil-conservation programs nevertheless doing the necessary conservation job on a purely voluntary, individual basis? Is it necessary and practical that organized conservation should cover 100 percent of the farms and farmlands of the Nation? If it is, what can and should we do; what is our responsibility as a Nation, to bring this about?

There is another and extremely important aspect of the conservation job ahead on which I hope we can make some constructive progress in the course of these hearings; that is, the relationship of overall conservation to the control of floods and the supply of water.

Only in the past few years have we as a Nation awakened to the full realization that there is an innate relationship between soil conservation and the kind of control over the movement of water which will at one and the same time diminish the destructive floods that periodically sweep down our river valleys, and hold the water where it can be most useful for agricultural, domestic, industrial, and recreational purposes.

Uncontrolled, water is a roaring force of waste, terror, and destruction. Controlled, it is an instrument of beauty, productivity, and prosperity. Water is the essence of life itself. The basic function of soil conservation is to control water.

This committee, among many other individuals and groups, has given much time and much thought to this matter in the past few years. We do not presume to say that we have found the final answer to what needs to be done to bring about a successful, coordinated, soil conservation-water utilization-flood control program. But I do think we have progressed far enough to recognize not only the necessity for such action but some of the things that can and should be done.

We are convinced, first of all, that soil conservation in its broadest sense is necessary to our survival. We are convinced that if a thorough conservation program is put into effect in the upstream watersheds of the Nation it will not only retain and control water for useful purposes but will greatly diminish the menace of floods.

We believe that any sound soil- and water-conservation is good, that the type of land use, soil treatment, and small-watercourse programs which will be put into effect in the far-upstream areas will be essentially the same regardless of what measures are taken with regard to flood control, waterpower, irrigation, or navigation in the main streams below.

We believe there has been enough planning and surveying with reference to the major rivers of the Nation to make it possible and practical to start an energetic program of upstream conservation and flood prevention without conflicting with sound development of the river valleys below. More than that we believe that it is impossible to deal effectively with the problems of our major streams unless we first put into effect sound soil- and water-conservation programs in the upstream areas.

We are convinced, in short, that we have reached the time for action in our upstream soil conservation, water utilization, flood prevention program. We hope that these hearings will help us to chart the course of that activity with certainty.

The course proposed at this time by the committee is embodied in the bills which were introduced by Mr. Poage, by myself, and by several other Members of Congress. The bill introduced by Mr. Poage is identical with the one which was drafted after extensive hearings by his subcommittee last year. It was introduced by him at that time and reported unanimously by the committee. Unfortunately it was too late in the session to obtain action in the House.

The bill I have introduced so that it would be available in printed form for this hearing is similar in most respects to Mr. Poage's bill. However, it embodies amendments to his bill proposed by the Department of Agriculture and embodied in the report on the bill now pending in the Bureau of the Budget, and one provision that is not in any of the pending watershed bills, so far as I am aware.

That provision embodies our conviction that this is the time for going one step further by repealing the authority the Department of Agriculture now has to conduct surveys and make reports under the Flood Control Act of 1936. It substitutes, in lieu of this specific authority, general authority for the Department to make river basin studies in cooperation with other agencies.

Under the specific authorizations of the Flood Control Act the Department of Agriculture has expended some $18 million in making studies, surveys, and reports. These have resulted in the start of exactly 11 projects, which were authorized in 1944.

In spite of the millions of dollars which have been spent in surveying and resurveying virtually every major watercourse in the United States, we are no nearer action on most of them than we were 17 years ago. In spite of thousands of conferences between representatives of agencies who agree on broad plans for river valley development, we are no nearer agreement on the practical blueprints for action than we were before the Flood Control Act was passed.

It seems clear to us, therefore, that now is the time to begin to put some of our plans into action and we hope that these hearings will give the committee and the Congress a clearer view of just what that action should be.

The CHAIRMAN. We will begin the hearings by calling upon Assistant Secretary of Agriculture, Hon. J. Earl Coke, who heads the group in the Department which deals with conservation problems.

If you will come forward, Mr. Coke, we will be very happy to hear from you.

STATEMENT OF HON. J. EARL COKE, ASSISTANT SECRETARY OF THE DEPARTMENT OF AGRICULTURE

Mr. COKE. Mr. Chairman and Members of the Committee, it is a privilege for me to open the testimony before this committee and to emphasize the importance this Department attaches to its responsibilities in the field of land and water and forest conservation.

In the long run nothing is more vital to the welfare of farm people nor to the strength of the entire Nation than the job we do to protect and develop our productive agricultural resources.

That job is a cooperative one and a continuous one. It is cooperative in a broad sense between people who make a living from the land and all the rest of the people whose well-being depends upon ever-increasing production from the land. It is also a cooperative job in the immediate sense between farmers and responsible agencies of the Federal, State, and local governments. It is a cooperative job between neighbors in every farm community in America. It is a continuous job for every man who tills the soil.

We need to keep reminding ourselves that America is a young Nation and that we have used our agricultural resources only a very short time.

In periods of abundance we must not lose our perspective with regard to the necessity for going steadily forward with improvements in all the science and the art of agriculture clear across the board. We must learn how to deal more effectively with forces that are constantly working toward decline in productivity. We need to recognize that declining productivity is not entirely due to neglect or reckless use of our resources—but that significant decline in basic productivity is occurring under conditions we have considered to be normal use and reasonably good husbandry. Conservation is more than stopping wanton waste.

We are not on the brink of exhausting our productive agricultural resources to the point of plunging headlong into famine. This Nation need not reach such a point of disaster or even try to scare ourselves into assuming we are at this point before we undertake additional positive and constructive steps to conserve our basic soil and water resources. But, just as surely, we must not be complacent about the fact that we have lost tremendous reserves of productivity from our soils and we are still using up those reserves at a rate we cannot afford.

To keep our perspective clear we need to look ahead as far as we can and try to foresee the demands likely to be placed on the nations' physical agricultural plant. The Department of Agriculture has attempted to do that and here is what we find. Population in the United States may reach 190 million by 1975. That means we will have to increase agricultural production the equivalent of present production from 75 to 100 million acres of cropland in order to maintain our present standard of diet.

But there is not 75 or 100 million acres of new land to be had. We, therefore, must meet that demand by such new irrigation, drainage, and other shifts in land use as may be feasible. But in the main we will have to meet that demand by conserving and improving the land we now have.

Studies made by this Department and the land-grant colleges leave no doubt about the ability of farmers and capacity of the land to

increase production by 20 or 25 percent within a decade if it becomes necessary. This assurance rests in no small degree on results of research which foresighted statesmen have provided for and supported. It rests equally on the fact that research findings have been systematically and effectively placed in the hands of farmers.

Those who will be concerned with meeting the demands of a population of 200 million people or more within a generation from now will need to be able to say that statesmen of our generation made provision for conservation of agricultural resources and for research and education needed to make the conservation efforts effective and sound.

In the revised budget for the Department of Agriculture for 1954, approximately $352 million is included for conservation and development of land, water, and forest resources. The total annual appropriation request for the Department regular activities is about $711 million. In other words, half of the annual appropriation requested is for specific conservation items.

I mention these figures here to emphasize the relative importance of conservation in the total program of the Department of Agriculture. While the $352 million is specifically earmarked for conservation and flood prevention functions of the Soil Conservation Service, Forest Service, and agricultural conservation programs, other supporting work within the Department also contributes to developing conservation techniques and to assisting with their application. For example, some of the research of Agricultural Research Administration and certain economic studies of the Bureau of Agricultural Economics help provide the factual basis of technical assistance to farmers. The Extension Service has a responsibility for providing conservation educational assistance to all farmers and has the principal responsibility for helping farm people organize their own soil conservation districts and to provide them with information needed to plan their district programs. The place of farm credit is not being overlooked as an important service to farmers in extending the application of soil and water conservation.

I am pointing out these related conservation functions within the Department of Agriculture to emphasize the fact that conservation is not something that comes in a package by itself. The entire Department of Agriculture has responsibility to contribute in a coordinated way to sound use and conservation of our agricultural resources. I expect to see this coordination of effort and teamwork continue in order to give even greater emphasis to conservation and to give improved service to farm people in whose hands the major task of conservation lies.

Funds made available to the Department of Agriculture are of vital importance and are essential for continuation and improvement of a sound national soil, water, and forest conservation program. There is no question about that. But these funds that represent the general public's investment in conservation of agricultural resources are matched many times over by the time conservation measures are applied on fields and farms and forests. It is reasonable to expect that local participation in the cost of all conservation and watershed flood-prevention work shall continue to increase as the value of such work is demonstrated and recognized. The voluntary contributions of time and effort of leaders and local officials who organize and pro-

mote conservation farming through local soil-conservation districts is a tremendous factor in the conservation movement. So is the contribution that private industries have made through their work to develop machinery to decrease the cost of applying and using conservation and improvement practices. What I am trying to emphasize is that funds made available to the Department of Agriculture are being used to stimulate and guide a tremendously large private investment in conserving, improving, and using productively our agricultural resources.

Remarkable as this total effort in conservation is, it is not enough. We cannot afford to be satisfied with it. It can be improved and we intend to use combined experiences and judgments to see that it is continuously improved. There is need for even greater teamwork to make sure our direction and emphasis is sound. There is more to do than we can get done; therefore, we must try to find ways to do those things we can least afford to postpone.

You are award of the interest springing up everywhere in upstream watershed conservation. This upsurge of interest is obviously growing solidly out of the observations and experiences of farmers and rural communities where soil conservation measures have been practiced longest and most intensively. They have seen the effects that soil-conservation and erosion-control measures have had on reducing damaging runoff and sediment from little watersheds. They have seen small retarding dams save culverts and bridges from washing out, and have seen these same dams stop gullies that were cutting farms in two. They have seen their soil protected and crop yields increased by the same measures that helped control the runoff of surface water. They have seen the effects of conserving and making the best possible use of water from flash floods in those areas where there is never enough water. There is sound reason why there are grassroot convictions about opportunities for flood prevention by starting the job in the upper watersheds and little watercourses.

In the Nation's total program of land- and water-resource development there is need to give greater emphasis to conservation and productive use of water high up on the watershed lands. Here is the point of first productive use of water and here is the first opportunity to begin control of the destructive forces of runoff of surface water that finally accumulates into destructive floods. If we wait until water reaches the rivers before we start controlling it and using it, much of the damage has already been done and much of its value lost. The Nation's program for resource development in river basins needs to give a more realistic emphasis to upstream watershed conservation and flood prevention.

The Department of Agriculture is proud of its place as the pioneer Government agency that spearheaded the whole conservation movement in America. It was concerned about the forests that first gave impetus to a conservation movement in this country. The first tangible action in governmental forestry work was when Congress in 1876 provided for the appointment of a forestry agent in the Department of Agriculture to study and report on the forest situation. The conservation movement got its first real impetus, however, in the early 1900's. Under the leadership of President Theodore Roosevelt and Chief Forester Gifford Pinchot, conservation became a widely accepted public goal and a major element of national policy.

In concluding this general statement I should like to emphasize again that I look upon the responsibilities in the field of land, water, and forest conservation and improvement as the greatest opportunity available to the Department of Agriculture to contribute to a more secure and permanently prosperous agriculture.

I feel certain there are opportunities to improve and broaden the service and assistance of the entire Department to farmers and ranchers in whose hands the major conservation job lies. We are studying our present programs to see how they can be improved.

I shall be very much interested in following the testimony before your committee for any suggestions that may help improve this very important segment of our work.

I have not attempted to discuss legislation designed to improve the effectiveness of our conservation programs or that may be needed to secure greater coordination between related work of departments in the broad field of resource development. I am sure these hearings will bring forth information and points of view that will be most helpful.

This general statement will be followed by short statements by agencies within the Department which have responsibilities in this field. I am sure you have a high regard, as I have, for the professional competence of the staffs in these agencies. The men who will follow me will be available to work with you on any special consideration you care to give to program details.

The CHAIRMAN. We thank you, Mr. Coke, for your very constructive and encouraging statement.

Now, I am sure there are members of the committee who will wish to interrogate you about the matters you have covered or other matters relating to conservation. And so we will ask you to stand by and answer these questions.

Are there any questions?

Mr. KING. Mr. Chairman.

The CHAIRMAN. Mr. King.

Mr. KING. I would like to comment.

Mr. Coke, I think that is an excellent general statement.

Conservation is one of those general terms like "sin," you know; we are all for conservation, but there is room for a considerable difference of opinion as to what is real conservation and what is not.

I have noticed that your statement is genral and not specific as to parts of the program. I would like to ask you: Do you believe in the conservation program in toto as it has been operating for the last few years; or do you have any specific changes that you would advocate?

Mr. COKE. Mr. King, I believe that I do agree with the type of conservation porgram that has been in operation. Again, I think that we may have to define that a little more closely. If you include in conservation the prevention of erosion, the prevention of destruction of soil, the improvement of soil, the improvement of forests, the controlling of flood, if you include as conservation a broad concept of that kind, then the answer is "Yes" that I am in favor of that.

Mr. KING. Do you believe in that phase of the conservation program which has in the past paid out a lot of money to farmers for doing that which they naturally do in the conduct of their business at their own expense?

Mr. COKE. In reviewing the budget for the agricultural conservation program for this year, it was our belief that we should not pay for continuing practices, annual practices, that farmers were generally doing themselves, and that the funds for that should be confined to the more permanent type of conservation practices—those which are more difficult for the farmer to carry on because of financial reasons, and those which have a great deal of value for the long-time general-public good.

Mr. KING. Then you would be perfectly willing to drop all payments for materials—fertilizers, lime, and those expendable items which have been part of this program in the past—you would be willing to wipe that out completely?

Mr. COKE. The exception to that is the use of lime or materials of that kind—fertilizers—that are used in the establishment of some permanent type of cover or pasture. But only insofar as it applies to the establishment of permanent pasture.

Mr. KING. You are thinking of soil conservation as a matter of keeping it in place. What is there about lime or fertilizer that will help it to stay in place?

Mr. COKE. The only part that lime or fertilizers would play in keeping soil in place would be in the establishment of a permanent cover, a permanent grass, for instance, that would prevent the erosion or loss of soil. And, as such, in some places, it is not possible to establish a permanent cover without the use of some of these additional elements.

And in that we think it would be justified to use these funds.

Mr. KING. You would limit those payments then to strictly permanent crops?

Mr. COKE. Yes, sir.

Mr. KING. You would not pay them more money for lime or fertilizer used in the production of vegetables or any other—cash crops?

Mr. COKE. That is our recommendation in the budget that we submitted.

Mr. KING. Are you in favor of paying the farmer for doing grading, terracing, and the work that he should do as a matter of good practice? Would you provide him Federal funds for doing that sort of thing in the improvement of his own property?

Mr. COKE. Well, generally I think those funds should be used for practices that would start a practice being used within a community as a priming of the pump, if you wish to call it that; or for such practices that the farmer cannot get returns for within a sufficiently short time so that he could finance it himself.

Mr. KING. You would be in favor of building dams and dikes to create ponds on farms with the same loose interpretation that we have had in the past as to what constitutes flood-control measures in that respect?

Mr. COKE. No, sir. I think that we should spend this money in the best way possible to get actual flood control and conservation—prevention of damage to the soil.

Mr. KING. That is all for the moment, Mr. Chairman.

The CHAIRMAN. Any further questions?

Mr. WAMPLER. Mr. Coke, is it your opinion that the present program of soil conservation as is being carried out by the Tennessee Valley Authority should be carried on in substantially the same form as it is now being conducted?

Mr. COKE. I am not sure that I am sufficiently acquainted with the detail of the Tennessee Valley program—I know it only in general—to be able to answer your question.

Mr. WAMPLER. Thank you.

The CHAIRMAN. Mr. Albert.

Mr. ALBERT. Mr. Chairman, I would like to say that I certainly appreciate Mr. Coke's statement.

With respect to upstream conservation, this program, I am sure you know, has been subjected to a certain amount of criticism. But I wonder if you could tell us roughly about what proportion of the farmland of this country is above contemplated large structures on the main stems of our big rivers and watersheds? Do you have any idea?

Mr. COKE. I do not. I think some of the witnesses who will appear after me will be able to give you that information. But I would not know.

Mr. ALBERT. Thank you.

Mr. POAGE. Mr. Chairman.

The CHAIRMAN. Mr. Poage.

Mr. POAGE. I too wanted to express my appreciation for the interest you have shown in this upstream program. I think it is absolutely vital to continuation of our farming operations in the United States. And I think it is absolutely vital to the maintenance of our cities in the United States.

Without it, I do not know how we can maintain municipal water supplies anywhere throughout this country. I recently heard a friend telling that his city lake was full. I said "You have had good rains." He said, "No. It is full of mud, not water."

One of the things that has bothered us, Mr. Coke, and bothered us long before you came to Washington, and we hope you can do something toward resolving the problem, is where do we draw the line between the functions of the Army engineers in what I like to call, and what they do call, flood control—the control of floods after they have originated, and the funtions of the Department of Agriculture in flood prevention—the preventing of floods before occurring.

Do you have an idea as to where that line should be drawn?

Mr. COKE. No, I do not. I sometimes question if you can actually draw a line.

I hope that that can be resolved. In fact, I am sure that it must be resolved.

Mr. POAGE. If it cannot be resolved, we are not going to get any progress.

Mr. COKE. I agree with you.

Mr. POAGE. The Army engineers apparently have no plans to do anything about this upstream program. In all of their existence they have never done anything about flood prevention. This is no criticism of their flood-control activities. They have controlled and have protected many areas from floods that have already developed. But once you let a stream go out of its banks, your flood has developed. From there on, it is merely a matter of controlling that flood.

I see the need of a tremendous program in the Department—and the Department of Agriculture has recognized it and is starting to work on it but has not gotten very far yet—of preventing those floods from occurring by the very things that you mention here—the upstream structures, practices, and works in the upstream thereby preventing these floods from spilling out over the stream banks.

Once you do that, you greatly lessen the need for flood control downstream.

You also lessen the hazard to our city water supplies of filling up. I have thought we probably were going to have to draw some kind of arbitrary line; just pick some figures out and say that the Department of Agriculture will have jurisdiction over structures not to exceed a certain retention capacity.

In legislation that is now pending before this committee, we have picked 5,000 acre-feet. We did that because some years ago the Department of Agriculture and the Army engineers in carrying on a joint survey picked that figure for the survey purposes. It may not be a good figure.

Would you care to comment on whether it has any merit or doesn't have merit?

Mr. COKE. No. All I would like to say is that certainly the problem is an acute one; and, whether this matter is reconciled by drawing a line or otherwise, it must be reconciled.

And we recognize that. And certainly if a line needs to be drawn, then, we can develop such a line.

Mr. POAGE. I think the line must be drawn, Mr. Coke. We are not going to get action on the upper end of the thing unless the line is drawn.

We have a bill, two bills, pending before this committee now fixing 5,000 acre-feet retention capacity as being the line as far as structures are concerned. I know your Department has written a report on that bill, but I have not seen the report because it has gone to the budget.

I do not know whether you accept that line or whether you feel we should get something else. I think that that is so important that I wonder if, during the course of these hearings, someone from the Department will be able to give us the Department's ideas as to where that line should be.

I want to repeat I haven't any predetermined solution of it. We have only thrown out the 5,000 acre-feet merely as a suggestion. But I wonder if the Department would not come up with some actual suggestion that we might feel the Department would support?

Mr. COKE. It may be that we can do that.

Mr. POAGE. I hope you can.

Mr. ALBERT. If we do not have something like that, don't we find ourselves with a big twilight zone here—the engineers saying "Well, that hardly accomplishes flood control" and the Department of Agriculture saying "This is hardly conservation." We hardly have a place where the two meet.

Mr. POAGE. I think you get a total eclipse.

The Army engineers in the Jones report suggested that they wanted to turn over flood prevention to the Department of Agriculture; that they wanted the Department of Agriculture to do this upstream work; but they wanted to review any plans the Department of Agriculture evolved for the erection of any structure, and they did not want any structure built without the prior approval of the Chief of Engineers.

Now, a terrace in your field in California is a structure. Had we accepted that philosophy, the Department of Agriculture might just as well have closed up the Soil Conservation Service and say "We will

do nothing except write reports and hand out bulletins; we will do nothing on the ground."

The Army engineers demand the right to pass upon every structure. I presume when you get down to it, if you put a furrow out in the pasture, it would be a structure—and you could not throw it up without prior approval of the Army engineers. So I think that unless we get this division of authority we have a total eclipse; not a twilight zone, but absolute darkness clear up to the top of the mountains.

It is for that reason, Mr. Coke, that I am asking that if the Department during these hearings can bring us a suggestion as to a definite division of responsibility, it would be helpful.

The CHAIRMAN. Mr. Thompson has a question.

Mr. THOMPSON. I think perhaps in my district we have a guinea pig that is going to shed a lot of light on this twilight zone or total eclipse Mr. Poage mentioned.

My Fort Bend County, is flat country so we do not have any of the upstream dam problem. It is almost entirely one of drainage. So far as I know, it is the first county where the Army engineers have figured in the drainage work in the major streams and their tributaries—and the Department of Agriculture and the local soil conservation districts have taken it wherever the Army engineers leave off. The Army engineers have already set the upstream limit beyond which they will not go.

They go upstream to a point where a stream no longer drains at least ten square miles. That is as high as they go upstream.

Now, we did not realize when we started the Fort Bend County drainage project how comparatively heavy the financing of the upper reaches is. After it was figured by the engineers, we began then reckoning with the comparative financial responsibility of the upstream and the downstream problem.

We found that that county cannot absorb the cost above the 10-mile point and provide an economical sound program. Since this is the guinea pig, and since it may have a very serious effect on the future of the programs, I asked the Army engineers to hold a conference, informal in character, with their advisers and with the Fort Bend County engineers, and county judge. It is to be held in Washington on the 11th of next month.

As the discussion here this morning developed, I am not sure that it would not be very desirable for your Department, Mr. Coke, to be represented there. And I take this means of inviting the attention of the chairman of our committee to that conference. And I will suggest that we do likewise for the committee officially.

Perhaps the staff or perhaps some of the others of you who may be interested would like to attend. Then you will see the financial inequities of the present policy of the Army engineers.

The CHAIRMAN. Mr. Hoeven.

Mr. HOEVEN. Mr. Coke, the question of jurisdiction certainly has to be ironed out. I do not know the answer.

I would like to refer specifically to the Little Sioux flood control project in northwest Iowa. The Department of Agriculture, of course, has jurisdiction in the soil conservation area; but two of the lower counties are under the jurisdiction of the Army engineers. And, as a result, there has been some bickering about an overall plan of flood control.

Such divided jurisdiction is not good. Something should be done to get both agencies to work together more closely for the conservation of the soil and the prevention of floods.

I am just wondering what steps the Department of Agriculture is taking in trying to iron out such difficulties.

Mr. COKE. I don't know that I can give you any definite answer on that. We do recognize the problem; and certainly the so-called interagency committees is not the answer to it. And that is the technique that has been used in the past. And it has been quite ineffective. And we have to find something else. But we recognize, as you do, the real problem involved.

The CHAIRMAN. Are there any further questions?

Mr. King.

Mr. KING. Mr. Coke, getting down to the field conservation problem, the program in the various farm sections of the country is conducted under county committees and district committees—getting the thing down to the local level, so to speak.

But there is a considerable power on the part of these committees to set up their own program and determine what the Government is going to pay them for. So we find in one district payments offered for the building of rock fences and in another district that could not happen because of their own rules.

Don't you believe that while you are getting this thing back to the farmer level of management that you are also inviting farmers to develop programs that just happen to suit them the best so that they can make the biggest grab out of it and almost without limitation by top authority.

In order words, there is a great variance among these districts in the practices for which you can get money. So each district sort of designs its own program to draw as much money as possible. I think if you looked over it carefully you would agree that some of the things that they pay themselves for are quite ridiculous.

This program should be modified so as to stick to what is basic conservation and stop all of this tomfoolery of paying farmers for building their own fish ponds and their rock fences and creating woodlots that they want for beautification. We should stop giving them lime and fertilizer and expendable items that should be a part of their normal operating expenses.

Now, I would like to make the point that this phase of the program should be rebuilt to save the Federal expenditures and save the program from a lot of criticism that it is getting on the farm level.

Mr. COKE. May I comment on the procedure that we are using this year in regard to that.

We have sent to the States a suggested list of practices. The practices that we have suggested are those which fit this overall policy of permanent improvements, permanent-type practices. Those will be reviewed by the county and State committees.

You obviously have to have different practices in different areas because of the wide variety of conditions in this country. Those recommendations from the county and the States will come back to us and will be set up in a handbook, a national handbook. And it is our hope that we can keep this to the overall policy of payment for permanent-type practices by the types of recommendations and practices that are set out in our handbook.

Mr. KING. You include in this permanent type practice, payments for what we call cover crops?

Mr. COKE. No, sir. That is one of the recurring type practices that has been paid for in the past and which in the suggested handbook that we sent out is not included.

Mr. ALBERT. Will you yield for a moment, Mr. King?

Mr. KING. Yes.

Mr. ALBERT. Isn't it true though, in view of declining farm prices, that we are liable not to get cover crops and the farmers probably won't be able to plant cover crops in many places this fall, and that indirectly at least we will be failing in what amounts to permanent conservation. Cover crops really help permanent conservation. I fear that we are not going to get much of that if we reduce some of those practices absolutely to zero in view of declining prices.

What do you think about that?

Mr. COKE. It may be that there will be some reduction. It would seem to me, however, that if a practice pays dividends as cover crops most often do, that a farmer could not afford not to make the investment in the seed required for an annual cover crop.

It is my opinion that the basic reason for the agricultural conservation program is one of obtaining real permanent conservation. And that is what we have set it up for for 1954.

Mr. KING. Mr. Coke, I think this would have a bearing on what Mr. Albert asked about. In times of low prices and in those circumstances where the farmer cannot afford to do these various things, have you ever found a better soil-conserving practice than just letting the farm grow up in weeds?

Mr. COKE. You mean for the prevention of loss of soil?

Mr. KING. If we have low prices because of overproduction, it is no calamity to the country, thinking of the country's interest, for those acres to go out of production. And based on a lot of experience, I have never seen a practice that was any better for conserving the soil than just abandoning it and letting it grow up in weeds. Nature itself will establish its soil-holding growth there.

The CHAIRMAN. Mr. McIntire.

Mr. MCINTIRE. Dr. Coke, in referring to the flexibility that you have in mind, am I correct in assuming that the flexibility would be sufficient to adjust your overall policy to areas which we might say are predominantly dairy and predominantly grass, and practices which could be considered as permanent practices in those areas as contrasted with areas where there is more of an open type of farming

I do think there are inherent practices in essentially grassland areas that are just as fundamentally important as those which may be more conspicuously visible in the way of structures and things of that sort. And your plan is to give that much flexibility in the consideration of these practices.

Mr. COKE. That is right.

And it is for that reason in order to get the flexibility and meet the permanent type of practices in the local communities that we send this out for review and additions to, if necessary, to meet the local situations.

Mr. MCINTIRE. Thank you.

The CHAIRMAN. Mr. Lovre.

Mr. LOVRE. Mr. Chairman, I am sorry that I missed part of the testimony and also a part of the questioning of Mr. Coke. But I

notice on page 5 of your prepared statement you state that "there is more to do than we can get done; therefore, we must try to find ways to do those things we can least afford to postpone."

In that connection, has your Department given any thought to the liberalizing of credit to those farmers who are willing to engage in improved land practices?

Mr. COKE. We have had some discussion that as a possible means of aiding farmers to apply permanent type practices. We do not have a definite recommendation at this time.

Mr. LOVRE. But it is the view of the Department that there is a need for such liberalizing of credit for those farmers who are willing to engage in that type of a practice?

Mr. COKE. It would stimulate certain practices very much if such liberalization was available.

Mr. LOVRE. I also notice on page 6, I believe it is, of your testimony, that you state:

> There is sound reason why there are grassroot convictions about opportunities for flood prevention by starting the job in the upper watersheds and little watercourses.

In connection with that, is there sufficient money in the appropriations to take care of surveys and planning for that purpose?

Mr. COKE. Well, I would have to say there is never sufficient money to do anything—that is, there is always need for more money. In the review of our budget we felt that there was sufficient money to carry on the work on the authorized watersheds, because you cannot move faster in this than the local cooperators are willing to move, unless you step in and do it yourself.

If you do it on a cooperative program as this is set up to do, then we feel that so far as the authorized watershed work is concerned, it is quite well financed.

Mr. LOVRE. Well, will there be any money available to your knowledge to start any new surveys in future?

Mr. COKE. No, sir.

Mr. LOVRE. Only those that have been started and have been authorized?

Mr. COKE. Yes, sir.

The CHAIRMAN. If there are no further questions, we thank you very much, Mr. Coke, for your statement, and for your appearance before the committee.

Mr. COKE. Thank you, Mr. Chairman.

The CHAIRMAN. The next witness is Dr. Robert M. Salter, Chief, Soil Conservation Service.

Mr. SALTER. I regret that time was inadequate for us to make copies of my statement for the committee; we hope to have them up before the end of this morning's session.

The CHAIRMAN. Thank you.

STATEMENT OF ROBERT M. SALTER, CHIEF, SOIL CONSERVATION SERVICE

Mr. SALTER. I should like to comment on the land and water resources of the United States, their conservation needs, and some of the problems involved in protecting and improving them for efficient production on a sustained basis.

Over the years we as a nation have leaned heavily on the natural fertility in the soil to meet growing agricultural demands. Until about 1920, we kept up with agricultural needs largely by bringing new land into production. By then most of our new land frontiers had been crossed. Since then, we have been limited to a more or less fixed acreage, meeting the growing agricultural needs by increasing per-acre production.

An ample supply of food and fiber is the basic foundation of our entire industrial system. Our whole economic structure is bolted to that foundation. Much of the raw material used in industry is raised on the land.

Obviously, the productivity of our land is basic to the general national welfare.

UNITED STATES LAND RESOURCES

In the continental United States there are about 1,904,000,000 acres of land. Some is excellent, some is not so good, and some is almost worthless.

About 409 million acres is now being used to grow cultivated crops. About 700 million acres is used for grazing. About 600 million acres is classed as forest or woodland. About 189 million acres is nonagricultural land of which cities, highways, roads, railroads, factories, mines, airports, parks, et cetera, occupy about 115 million acres. Much of this was once our best agricultural land. The current rate of nonagricultural encroachment is alarming.

Our land resources are adequate to meet our needs for a long time to come, if we care for them properly. But, they must have better care than we are now giving them.

By the 1st of January this year 1,225,000 farmers and ranchers, cooperators with soil-conservation districts, had under way on their land, with the help of the Soil Conservation Service, programs for the protection and improvement of their soil and water resources. They operate a total of 352 million acres of land—about 30 percent of the agricultural land of the United States. They have developed or are in the process of developing basic conservation plans for their land. About half of their planned measures have already been applied.

An equally large number of other farmers and ranchers have installed one or more individual conservation measures as a result of their interest and with the assistance of other Federal and State agencies. Although about two-thirds of the farmers and ranchers in the country have some knowledge of conservation, there still remains nearly 900 million acres of agricultural land in farms and ranches in need of basic conservation treatment.

The conservation problem:

The major causes of the decline of the productive capacity of our soils are:

1. Intensive and continuous cropping which has burned out much of the organic matter resulting in impaired structure and making drainage and even cultivation difficult.

2. Leaching and removal of minerals by crops at a faster rate than they are being returned to the soil.

3. Improper land use and improper farming practices which have permitted—

(*a*). Water erosion to remove part or all of the topsoil and to cut gullies into our upland fields at the same time clogging drainage ditches and tile lines below.

(*b*) Wind erosion to remove the thin layer of productive topsoil from the lighter textured soils of the Plains and to cause damaging deposits of less fertile sands on adjacent farms, roads, and cities.

(*c*). Wastage of water needed for crop production, which has added to the flood problems downstream.

(*d*). Depletion of the cover on much of our pasture, range, and woodlands.

4. Improper distribution layout and wasteful application practices which have resulted in waterlogging, structural changes and salt accumulations in our irrigated soil.

5. Floodwater damage which has resulted in about half of our best bottomland being used much less intensively than its capabilities permit.

Along with the decline of productive capacity there have been many other costly byproducts including silted reservoirs and stream channels, impaired harbors, destroyed wildlife resources, depleted underground water supplies, lowered tax bases, and increased pressure on our remaining good land.

The problem confronting us is one of eliminating the causes of deterioration and of making the agricultural land of the United States support a fast growing nation with a high standard of living for our generation and those that follow us. Agriculture cannot look to new land and expanding farm acreages to satisfy the Nation's future demands for food and fiber.

To meet the demands of the future, existing acreages must be made to produce more abundantly. We must move rapidly to protect and build up soil productivity to sustain higher and more efficient yields of crops and livestock products.

At the rate we are now going it is my opinion that our soils are still deteriorating faster than we are building them up. Our conservation efforts have helped slow up this downward trend, but we are not yet moving fast enough to reverse it.

Much of our land, while still productive, is not as productive as it can be made. For many soils we have available the technology to build up and maintain their productivity. The problem is to get that technology into use on more farms—to get applied all the technology we now have, plus all we can get from a vigorous program of research.

Conservation farming, emphasizing the use of land within its capability and the application of all practices needed for its protection and improvement, offers an effective way of increasing production efficiency and lowering costs.

Surveys of the Soil Conservation Service indicate that erosion is still proceeding at a serious rate on about 200 million acres of cropland. About 50 million acres of flat, potentially highly productive valley land is subject to overflow by floodwaters. Most grasslands are producing at only about half the rate of their capability.

It is apparent that we are still losing ground as far as conservation of our soil resources is concerned.

FAR WEST

Much of the western irrigated land is suffering from accumulations of toxic salts and waterlogging.

Also, the structure of heavy soils is deteriorating under certain irrigation and cropping systems, making it difficult to get irrigation water into the soil. The prevention of salt accumulations and the conservation of good physical properties in the soil are the most important criteria of good cropland use in this area. On millions of acres of grazing lands in this region proper management practices are needed to improve livestock production and provide better protection against wind and water erosion.

THE GREAT PLAINS

In the Great Plains, moisture has been the primary factor limiting production. Recurring droughts create a precarious situation in this region, pointing to the need for proper land use, maintenance of residues on cropland and sound management of vegetative cover on range land. Subsurface tillage, fallowing, and other cultural practices designed to leave crop residues on the soil surface are used to conserve both soil and water. Protection against soil blowing is a particularly important step in sound land use here.

Despite improvement in mulching and subsurface tillage, land use in this area has been primarily exploitative in nature. Although cropping has not yet generally depleted soil fertility reserves to limiting values, it is only a matter of time until it will. Continued cropping to wheat combined with fallowing and row-crop cultivation has already resulted in the loss of one third or more of the organic matter and nitrogen originally present in these rich soils.

From the standpoint of long-time food and feed supplies in this country, the problem of maintaining the soils in the dry-land area is one of the most serious we face.

NORTHEAST AND NORTH CENTRAL

In the Northeastern and North Central States, soil deterioration is widely varied. In the Northeast, where soils were naturally infertile, soil productivity is now on the upgrade on thousands of farms.

In the Midwest, however, prevailing farm practices have led to a progressive decline in the organic matter and nitrogen content of the soil. In places this loss has amounted to as much as one-third to one-half of the original content. And the decline is still going on at rates estimated as high as 1 percent per year in the middle Corn Belt.

This has the effect of impairing drainage, water infiltration, soil aeration, and ability of soil to yield up nutrients to crops. Crops seem to suffer more in dry weather. Many farmers have found it necessary to install additional tile lines on land that once drained satisfactorily. On sloping soils, erosion is taking a heavier toll, as compaction slows intake of water and increases runoff.

Here we know how to manage soils so as to maintain organic matter and nitrogen. The problem is to get these management practices into more widespread use.

SOUTH

In the Southern States, conservation and rehabilitation of soil resources probably offers as great a challenge and opportunity as anywhere in the country. Soils here were already highly leached before they were put to agricultural production. High rainfall and temperatures continued to favor rapid organic matter decomposition and loss of soil minerals by leaching and erosion.

It has been estimated that in the Piedmont region, two-thirds of the land that has been cultivated has lost part or all of its topsoil, and in many cases some of the subsoil. Erosion and gullying have been so severe that thousands of acres have been abandoned for crop production.

Most of these soils, however, are responsive to fertilization and other good management practices. Climatic conditions that have made these soils what they are also offer unusual opportunities for increasing levels of productivity.

NEEDED LAND-USE ADJUSTMENTS

The Soil Conservation Service estimates that there are only about 460 million acres on the farms and ranches of the country that are suitable for growing cultivated crops continuously under present economic and technological conditions. We have now about 409 million acres in cultivation, but all of it is not suited for that purpose.

Preliminary SCS estimates show that about 46 million acres in cultivation should be converted to grass or trees permanently. Only in that way can it be protected from eventually becoming unfit for almost any productive agricultural use.

To more than offset this 46 million acres, however, are about 95 million acres of farm grassland and woodland that are potentially suited for cultivation if properly used and protected. About 30 million of these 95 million acres will require drainage or irrigation before they can be used for cultivation. Some of this unimproved land will need to be cleared of trees before cultivation.

FLOOD PREVENTION

An important part of the conservation job is flood prevention. Flood prevention begins where the rain hits the earth and the snow begins to melt. Solution of the flood problem starts with the right land use for each kind of land and the application of needed conservation practices to prevent erosion and get more water to go into the soil and pass through it slowly, seeping out into quiet clean streams.

These conservation measures, however, are not always enough. The job also includes small floodwater-retarding dams on the "little waters" above the valuable alluvial bottom lands. It includes also improvement of channels through these bottom lands to prevent overflows, stabilization of major gullies, and sediment traps to prevent destruction of bottom lands by infertile sand and debris.

Flood-prevention efforts should concentrate on protection of agricultural lands and small communities, the roads and highways and farm houses along the headwater streams. Enough flood protection

is needed to encourage bottom-land farmers to restore and keep their bottom land in continuous and profitable production.

Recent studies show that three-fifths of all the Nation's average annual flood damage occurs on the headwater streams, and a large proportion of it is agricultural.

Throughout this country, about 50 million acres of land are subject to overflow in headwater valleys above the locations of any major flood-control improvements thus far proposed. That is an area about 40 percent larger than the State of Iowa. Most of the flood damage on these acres is caused by frequent small floods. On the average, 75 to 95 percent of agricultural flood losses in headquaters valleys are caused by floods of the kind that occur more frequently than once in 10 years.

Water shed programs generally can give protection against these frequent floods at a very substantial ratio of benefits to costs. If all the 50 million acres were protected up to a 10-year flood, the additional agricultural production that could be obtained would go a long way toward helping to meet our increased food and fiber requirements of the future. These bottom land soils are potentially among the most productive we have in this country.

FARMERS NEED TECHNICAL ASSISTANCE

The soil- and water-management problem is especially difficult because the technology of land use and soil treatment must be fitted specifically to the pattern of soil and water resources of the individual farm or ranch as well as to the resources and aptitudes of the farmer himself.

Throughout the country thousands of different kinds of soil exist. There are wide differences in soil types on individual farms—difference in slope, degree of erosion, drainage, inherent fertility, and past land use.

The determination of the particular pattern of soil- and water-resources on a farm and the adaptation of available technology to the protection and improvement of these resources requires knowledge and skills that most farmers do not possess.

To develop a sound and economical plan for conservation farming a farmer needs, first, to have a scientific inventory of his soil and water resources.

Next, the farmer needs assistance in choosing among alternative uses and treatments for the land, based on this scientific inventory. He needs assistance in selecting and combining into a practical plan those measures which will protect and improve the land resources, contribute most to a sound management program for the farm, and aid in the solution of watershed and other resource problems of the community.

Most farmers also need technical help in applying complex practices, such as water-control systems, drainage systems, terraces, and certain crop, pasture, range, and woodlot practices.

Furnishing this on-site technical assistance for soil, water, and plant management—aimed at soil protection and improvement, water conservation, flood prevention, and economic production on a sustained basis—is essential to the conservation job.

SOIL-CONSERVATION EDUCATION

Soil-conservation eduation is a fundamental step toward the application of conservation measures on our agricultural land. The conservation-education job is to help all the people, both rural and urban, understand the needs for and benefits from conservation farming.

Education plays an important role in informing farmers and ranchers of the principles and practices involved in soild and water conservation and in relating conservation measures to the other features of good farm management. Conservation education facilitates the effective use of on-site technical assistance.

To get conservation technology into action on more land more rapidly, as we must do to meet the future agricultural demands of the Nation, greater teamwork must be developed between conservation education and on-farm technical assistance.

FINANCIAL ASSISTANCE IS ALSO NEEDED

A well-planned program for conservation farming on most farms comprises practices the application of which requires considerable capital investment. Moreover, shifts to conservation farming often require temporary economic sacrifices since some time may be needed for returns from the new system to equal and exceed the old system.

For example, on many farms in the Southeast, shifting from single-crop farming to balanced farming including livestock requires substantial investment for the establishmnet of improved pastures, fencing, livestock, building, and equipment. Many farmers require financial assistance in order to put conservation farming into practice.

The development of forms of public and private credit better geared to the repayment potentials of conservation farming would aid materially on many farms.

THE KEY TO CONSERVATION PROGRESS

The Soil Conservation Service always has recognized that the final responsibility for achieving our conservation objectives rests with the people who own and operate the land. They have always had the responsibility. What they lacked was a mechanism or organization through which they could assume leadership. Soil-conservation districts supply that need.

Over 2,500 soil-conservation districts have now been organized. They cover 80 percent of the country's agricultural land and include about 85 percent of all farms and ranches in the Nation.

These districts are local units of State government, organized and controlled by local people. They are a highly effective device through which the Government can serve farmers without dominating them. As a matter of fact, soil-conservation districts are becoming more and more the focal point for programs dealing with land use and soil, water, and crop management in the field of conservation farming.

Important progress has been made, too, through the evolution of the concept of soil conservation and the conservation objective.

The original objective was to overcome the tragic erosion menace to American laad. Gradually during the last 20 years the concept was broadened, until today the objective is to use each acre of agri-

cultural land within its capabilities and to treat it in accordance with its needs for protection and improvement.

The concept of soil conservation has come to mean proper land use, protecting the land against all forms of soil deterioration, rebuilding eroded soil, conserving moisture for crop use, proper agricultural drainage and irrigation where needed, building up soil fertility, and increasing yields and farm income—all at the same time.

Modern conservation farming involves increasing soil productivity and increasing standards of farm living for today, tomorrow, and for posterity. It combines the objective of national welfare with better living for the people who work the land. It has come to mean efficient abundant production on a sustained basis.

FUTURE PROBLEMS

Now, I should like to comment briefly on some major problems which undoubtedly will have considerable impact on the long-range future of the conservation movement.

As Mr. Coke stated, one outstanding development has been the rapid growth of interest in small watershed conservation programs. Interest has spread not only among farmers but also among merchants, bankers, industrialists, newspaper and magzine editors, and many others. In fact, the rural and urban interests have joned forces in this movement.

Most significant, perhaps, is the fact that these local watershed interests are not asking the Federal Government to take over. They want to maintain local responsibility for such programs in their communities and to provide locally for an important share of the cost of watershed improvements.

Local watershed organizations and groups, which now number about 800 in the United States, have been increasingly pressing the Department of Agriculture to provide technical planning assistance. They want technical assistance for needed measures that cannot be installed by individual landowners and operators, for measures which have benefits to groups or the public rather than just to individuals, and for measures which benefit nonagricultural as well as agricultural interests. At this time the Department is supplying a very limited amount of assistance requested by these groups.

It was apparent that the Omnibus Flood Control Act of 1936, with subsequent amendments, intended that agricultural flood damages, wherever they might occur throughout the country but particularly along the small tributaries, the creeks and branches, would be given attention by the Department of Agriculture. The Department has subsequently submitted to Congress reports of watershed surveys or has under way surveys on more than 70 percent of the total land area of the country. So far only 11 watersheds have been authorized for operations work by the Congress, and these were authorized 9 years ago. They comprise only 2.2 percent of the total land area. Obviously, the mechanism of the flood-cotrol act, insofar as the Department of Agriculture is concerned, is not working.

The Department is primarily concerned with preventing flood damage to the bottomlands and rural property in the upstream portions of the watersheds. The Department should be able to lend technical assistance on watershed problems as rapidly as local people

are willing and ready to assume the local share of the responsibility for flood prevention.

The Department does not have responsibility for flood control which is the result of the accumulation of waters in major stream valleys, even though upstream flood prevention programs can effect a reduction in downstream sedimentation and in peak flows in major floods. The authorization procedures need to be simplified materially in order that the Department of Agriculture can assist with flood prevention on the hundreds of small watersheds throughout the Nation.

Second, as I indicated earlier, we are also still concerned about the rate at which conservation work is being applied on the land. Although the rate of application has been speeded up, we still doubt that we are going fast enough to meet the national needs.

As of now, only about 1 out of every 4 farmers is getting help with conservation farm planning. We need to speed up the job of helping farmers to develop and apply conservation farming plans for the other three-fourths of the farms in this country. And we need to be sure that well-rounded plans are developed—plans that are both scientific and practical. A good plan for conservation farming needs to provide not only for abundant production on a sustained basis, but also afford the farm family a respectable standard of living.

The conservation work done last year provided protection and improvement for about 3 percent of the Nation's land still in need of conservation treatment. That rate is double what it was 5 years ago, but it is still too slow.

Third, as a part of stepping up this rate of accomplishment on both individual farms and in the watersheds, we need to speed up soil survey activity. The first requirement for developing a sound conservation plan for a farm is a land capability map based upon a soil survey of the farm. Hence, conservation planning activities are limited by the availability of soil-survey information.

The backlog of soil survey information is becoming low in many sections of the country, and could become critical. Farmers operating 72 million acres of land became new district cooperators last year whereas only about 40 million acres of new soil surveys were made. The lack of adequate soil survey maps could become a bottleneck to our overall conservation planning effort.

Completion of a national land inventory is important not only to the development of soil-conservation programs on individual farms, but also to watershed development to the research programs of the Department of Agriculture and State colleges, and to the action programs of all agencies concerned with land use.

THE JOB AHEAD

Now perhaps I should summarize what I have been trying to say. The future of our Nation depends in no small way on our ability to protect and improve our basic soil resources so that we can supply the needs of the Nation for this generation and for all the generations that follow. Failure to meet these demands could threaten the Nation's ability to meet world responsibilities. This in turn could endanger our democratic way of life and bring about a lowering of our American living standards.

Our soils have the capacity to produce at much higher levels than they are now producing. It is urgent that we apply to our agricultural land those measures that will stop the deterioration now going on and that will improve and maintain soil productivity at higher levels.

Protecting agricultural values, especially the potentially highly productive bottom lands in the upper watersheds of the Nation's streams and rivers is a significant part of the conservation job and deserves more aggressive attention than it has yet received.

In conserving the Nation's soils and protecting the agricultural land from floods, individual farmers and local communities must play the primary role. But, for them to get the job done, it is imperative that they have the best possible information, guidance, and assistance.

The CHAIRMAN. We thank you very much, Dr. Salter, for your very informative statement.

I want to ask you a few questions, and I am sure there will be other questions on the part of the members of the committee.

The figures show that our agricultural production in recent years has been expanding; if my memory is correct, last year, 1952, our overall agricultural production was about 45 percent more than the average for the years 1935 to 1939. Yet apparently from what you have said and what others have said, our soil has actually been deteriorating during all that time.

Mr. SALTER. That, Mr. Hope, I think is correct. Through the application of technology generally, such things as improved crop varieties, greater use of fertilizers, mechanization, better machinery with which to cultivate at the right time, better methods for protection against insects and diseases, through all of these things, production has stepped up greatly.

Conservation measures have helped appreciably, too. We have made progress. But, if you take most any farm, in the Middle West, for example, and use the same varieties of crops, the same amounts and kinds of fertilizers, the same practices that we used 20 years ago, we would get lower yields than we got 20 years ago.

In other words, the inherent productivity of our land has been going down at the same time that our production has been going up.

The CHAIRMAN. Well, that leads up to the question that I wanted to ask.

And that is: How long do you think that we can counterbalance the loss of productivity through erosion and loss of natural soil fertility and that sort of thing by improving our varieties of crops, by producing better strains of livestock, by improving our methods, by increased mechanization and greater use of fertilizers and all of those things?

Mr. SALTER. That is a difficult question to answer. Doubtless there will continue to be progress in technology which we can capitalize on even while we permit our soils to deteriorate.

Actually, we are making progress in slowing up soil deterioration. An estimate that I made recently, which had a good many assumptions in it, indicated that we ought to hit the balance between decline and improvement of our soils in about 10 to 12 years at the rate we are going now. So we are making progress, but we are not yet at the balance point.

The CHAIRMAN. I take it from what you have said that you do feel that unless we are able to do more than we have done in the way of conserving our soil that in time, notwithstanding our technical prog-

ress, and our improvements in crops and livestock, we will reach a point where we will not be able to supply the needs of our people as far as agricultural production is concerned?

Mr. SALTER. I believe that if we keep up with the progress we are now making with soil and water conservation that we do not need to worry about ever reaching the point where we cannot provide the basis requirements of our economy.

As I said a minute ago, our present progress would indicate that we should come to a balance in about 10 to 12 years. However, as our population increases, I believe we will reach the stage where despite all the technology we can develop through research, we will not meet the needs of our increasing population unless we get more conservation on the land.

The CHAIRMAN. Well, our population is increasing at the rate of about 1½ percent per year. Assuming that we go along with about the same amount of agricultural acreage that we have now, which has been pretty constant in recent years, and leave out of consideration exports and imports, it means if we are going to maintain our present standards of agricultural consumption, our present standard of living in that respect, we will have to increase the productivity of our soil by approximately 1½ per year.

Are we doing that at the present time?

Mr. SALTER. No, sir. At the present time, we are not increasing our productivity rate.

THE CHAIRMAN. We have been fortunate in the last 10 years as far as the weather is concerned, have we not?

Mr. SALTER. Yes. If we were to have a recurrence of drought such as in the 1930's, we would find that the decline in productivity of our land would be much more evident in crop yields than it has been in been in the last 10 years.

The CHAIRMAN. Are you satisfied with the progress that we are making as far as conservation is concerned?

Mr. SALTER. Mr Hope, I think it would be in the public interest for this Nation to move ahead with conservation work at an appreciably faster rate than we have moved in the past 20 years.

Our rate of progress is highly encouraging. We are proud of the increased efficiency with which we have been able to use the money supplied by the Congress for technical assistance in conservation. But it is my firm conviction that it would be to the economic interest of the United States to stop the deterioration of the soils and to improve them to their point of optimum economic production much faster than we are doing at the present time.

The CHAIRMAN. Well, on the basis of the programs which you are able to carry out now, and the appropriations that you have been receiving, have you been compelled to turn down applications for technical assistance both in the field of conservation on the land and in connection with the applications you have had for watershed protection?

I think you did say a while ago that you have not been able to meet nearly all the requests that you have had for surveys in watershed projects. And I assumed that that was because you have not had the funds or the personnel to carry out those projects?

Mr. SALTER. Yes. In the last couple of years, we have had requests from approximately 240 watershed groups asking for assistance.

And they are scattered pretty well over the United States and one in Puerto Rico.

We have not had the resources to give any appreciable assistance to those groups. Now, from the standpoint of our general conservation program, we have not had adequate resources to supply the assistance which the soil conservation districts believe they need.

Perhaps we have gone about as fast as we could from the practical standpoint of training people and getting additional personnel to do the job. But, we have not furnished the districts all the help they indicate they need.

Mr. WHEELER. Will the gentleman yield at that point?

The CHAIRMAN. Yes.

Mr. WHEELER. When you are speaking of technical personnel, I take it you are speaking of the technicians around in the counties in the offices who actually go out and do the technical work of drawing plans and so forth?

Mr. SALTER. That is right.

Mr. WHEELER. Well, I just thought I might suggest—I hope it is not true in all areas—but down in my section, if you need any of these technical people, you can find them down in my section most any day you want to, playing pinball machines or in the pool room or hanging around the drug store.

It has been my personal observation that these technicians in my section spend about one-fourth of their time on the job and about three-fourths of their time doing something else.

Mr. SALTER. I am sorry to hear that, Mr. Wheeler. I do not believe that is a generalization that could be applied to the personnel of the Soil Conservation Service. I have seen these men in action, and we have methods by which we check up regularly on their performance. I believe other members of this committee are aware of the sincerity, the devotion, and the energy, of many of these men

Mr. WHEELER. As I said, I hope it is not widespread. But I have received some serious complaints from other people that it is true. It has not been altogether my personal observation. People down in my section complained to me last fall when I was home and as recently as the Easter recess. They have said to me, "I understand from the newspapers and radio reports and so forth that you people in Washington are attempting to balance the budget. And I think you would probably like to have me point out where you could save some money."

Upon inquiring as to what they were speaking of, they said, "Why So-and-So, I see him here playing this pinball machine at least two-thirds of the time and he is drawing $4,000 a year as a soil-conservation technician. It seems to me that he should be given more work to do; if there is not enough work in this particular county to keep him busy, at least half of the time, then maybe he should be given jurisdiction over a couple of other counties."

Now, I just bring that to your attention since you are talking about the shortage of personnel. If that situation is very widespread, I think maybe it should be corrected. In fact, it should be corrected even if it is not any more widespread than has been brought to my attention.

Mr. SALTER. I am very glad to have it brought to my attention, Congressman.

The CHAIRMAN. Mr. Hoeven.

Mr. HOEVEN. Do you feel that there actually is a shortage of technicians throughout the country?

Mr. SALTER. There is a shortage, particularly in the engineering field.

Mr. HOEVEN. Is that due to the fact that young men are not going to college for training?

Mr. SALTER. One important difficulty is the great competition with private industry for men with engineering training; particularly now with defense mobilization. Many of those technicians are engaged in industrial or even in military engineering work.

Mr. HOEVEN. The question of salary then is involved?

Mr. SALTER. The question of salary is a factor.

Mr. HOEVEN. Just one other question on the overall program of soil conversation.

I am confident that the American farmer is intensely interested in soil conservation. Isn't educating the farmer important?

I think every county in Iowa is now organized for soil conservation. And still I find some of our farmers are a bit skeptical about soil conservation practices. I have suggested that we should establish a model soil conservation farm in every county.

Have you given consideration to such a proposal?

Mr. SALTER. That has been an interesting suggestion which has come up from time to time. In the few places where it has been tried, it has been highly effective. A widespread program of this type would take considerable public funds to get started. It could probably be handled by the States on a State basis.

Mr. HOEVEN. You are giving it some consideration?

Mr. SALTER. We have thought about it. And we have not reached any final solution.

Mr. HOEVEN. I hope you will keep it in mind. I think it will be very helpful.

Mr. SALTER. Answering your first question: I am sure, Mr. Hoeven, that education on the benefits of conservation farming—what can be expected from it in terms of financial returns—has been one of the limiting factors to our moving ahead faster.

I am sure a more vigorous educational program with farmers would be most helpful in moving ahead faster in this field.

Mr. WHEELER. Will the gentleman yield for a question on the education angle?

Mr. HOEVEN. Yes.

Mr. WHEELER. Let's assume that the whole Federal program of soil conservation had been abruptly stopped 4 years ago, we will say, just to pick a figure out of the air; what proportion of the farmers of this country do you think would still be as of this year continuing in their soil conservation practices without this Federal incentive?

Mr. SALTER. You are talking now about the financial assistance program?

Mr. WHEELER. Well, the whole program in general. Say the whole conservation program had stopped 4 years ago. We are talking about it being an educational program.

In other words, how well educated were the American farmers 4 years ago, or how well educated are they today as to the need for continued soil conservation practices; and if they are not sufficiently educated, how much more money, or how much money each year is it going to cost to educate them?

Mr. SALTER. Let me speak first to your original question.

There is probably no doubt but that financial incentives to conservation have had an appreciable educational effect. There is no way that I know to determine what the extent of that effect has been without stopping the program.

I might relate this experience: I worked for many years in the State of Ohio. Ohio was one of the first States to recognize the general need for lime in its agriculture. Early in the 1920's, we estimated on the basis of the best evidence available at that time that the State of Ohio should be using 2 million tons of limestone equivalent annually.

With all of the devices of education that we could put into play, with schools, thousands of demonstrations, with lime trains, the use of newspapers, bulletins, and radio after the radio came in, we got the use of lime up to about 400,000 tons annually and it stuck there.

In the 1930's, when the depression started, it went down some. Then came the agricultural conservation program and increased agriculture prices during the war years. The use of lime in the State of Ohio increased from the midthirties up to more than 2 million tons and has been above that figure for several years.

Now, I do not know, and I do not believe anyone else knows, how much lime would be used in the State of Ohio if payments for lime were discontinued.

Mr. WHEELER. Let me say at this point: in answer to critics of the whole program, I have contended that it was basically an educational program. Then when they asked me "Well, how much longer is it going to take to educate the American farmers as to the need for continued good soil conservation practices?"; the answer to that question is what I am asking you.

Mr. SALTER. Well, the fact remains that a substantial proportion of the American farmers are not following good conservation practices.

Mr. WHEELER. Is it because they do not want to or that they do not know what the practices should be?

Mr. SALTER. I do not believe that question can be answered arbitrarily. Undoubtedly a great many of them are not doing as well as they know how.

Mr. WHEELER. How much more incentive would they have to be given—those people that actually know that they should follow these practices, but for various reasons, do not? How much incentive will we have to give them to conserve our natural resources?

Mr. SALTER. A good many farmers may know about the benefits from conservation practices, but there are certain parts of the conservation job that farmers cannot do for themselves. I mentioned a while ago the technical assistance that is provided to individual farmers on their specific land. First, was the determination of the pattern of soil and water resources to help the farmer select the technological factors that are suited to that particular pattern of resources. Now that appraisal of his resources and helping him to pick out the alternative uses and conservation measures is not something that you can get ordinarily by the usual education process.

Mr. WHEELER. What you give in this technical information is to furnish him with a soil map and so forth. How much further should we go in seeing to it that he does what those maps indicate?

Mr. SALTER. We consider, of course, that the actual application of the conservation measures is the most important part of the Soil

Conservation Service job. Helping the farmer to get some of those practices applied we consider as our primary objective.

Mr. WHEELER. Should we aid him in doing just those things that are considered permanent or should we aid him in the annual practices such as the spreading of lime and other fertilizers?

Mr. SALTER. Mr. Wheeler, we try to help the farmer at least to develop a well-balanced conservation plan. In a well-balanced plan one practice is usually as significant as another. For example, to realize the benefits from soil drainage, or from terracing, you have to combine those practices with good cropping systems, and good soil-management programs. We try to get the farmer to take the whole works and put it into effect.

Mr. WHEELER. Thank you.

The CHAIRMAN. Mr. Poage.

Mr. POAGE. I just wanted to testify a little myself.

I would like to say that I live in the Southwest, and it happens that the Soil Conservation office is on the same floor of the building where my office is. I see something of what they are doing every day when I am home.

The only complaint I have heard about the activities or observed myself of the Soil Conservation Service in my area is that there just are not enough hours in the day to go around to cover all of the farmers where the technicians are needed and wanted. If there are any pinball-machine addicts over in the Southeast, I want to put in my bid to have them transferred to the Southwest and we will keep them away from the pinball machines. We will put them on the farms, because the regional director of Soil Conservation Service, Louis Merrill, has been doing that very thing and for a great many years we have had an unfilled demand for technicians.

You suggested that possibly we were doing as much as we could practically do. Maybe that is correct, Dr. Salter; but we have not thought so in the Southwest. We have thought that if there had been more money available, that you could have supplied technicians to districts where you did not supply any because you did not have the personnel.

We thought that you could have given us work groups in areas where you did not give us any because you did not have the force. That has been our complaint; not that when we got those work groups that they did not work; because we found that they worked. We felt that we got a great deal of good out of every one of them. We have no complaint to offer that I know of anywhere in Louis Merrill's area.

Mr. ALBERT. That includes Oklahoma.

Mr. POAGE. It includes Arkansas and Louisiana and Oklahoma, as well as Texas.

But I do not know of any instance where these men have not earned their salary. But there has been a lot of complaints that there has not been enough men to go around. You have got a lot of districts in Texas where you have not got a single technician. You have a lot of districts in Texas that are very large where you only have one work unit, and where that work unit finds it impossible to get to the farthest areas.

Mr. Chairman, I just want to testify that the work has been good, but there has not been enough of it in my area.

Now, I want also to comment on another matter that was raised, that the gentleman from Georgia raised.

The question of philosophy—not your program probably, but the agricultural conservation program—with which I take it you may have a larger responsibility as the times goes on, and I think properly so; and again I want to testify, Mr. Chairman, that in my opinion, we do not have to measure the good of soil conservation, either the technical work or the incentive payments, solely by the question of whether you are educating some farmer. That is the responsibility of the Extension Service—to educate. We have had an educational system in agriculture long before your organization was ever created or before we had any kind of incentive payments.

I have felt, and I still believe, that there is a public interest in carrying on these soil conservation practices just as truly as there is a private interest. If there is not, it seems to me that our program is failing. It seems to me that as we contribute public money, we should ask: Does the public get a benefit from these practices?

If the public gets a benefit from these practices, then I think we justify the expenditure of public funds to get the practices carried out. If the practice is one which benefits no one except the individual farmer, then it seems to me that by that test, that practice should be eliminated or at least any Government assistance for that practice should be eliminated.

I do not want to draw a narrow line on what the public benefits from. I have had people in my country tell me that all the construction of these stock ponds, tanks we call them, has no public interest. They say, it just benefits Carl Albert on whose ranch one was built. That is far from the truth; if you can build a thousand stock ponds in a given country, you will retain a tremendous amount of water that would otherwise run down and contribute to floods for which the Army engineers would probably pay fully as much or more per acre-foot for retaining it.

Now, the public does have a benefit in that, because it does involve and reduce the expenditure of public funds at another point, even though the farmer does get a benefit.

So, we have tried to make these practices something in which both the farmer and the public should contribute to the expenses of and in which both the farmer and the public should share in the benefits.

It seems to me that we must never forget that the public does have or at least should have in all of these practices a definite stake. When we pay for listing lands—and I know that immediately somebody says "Why, listing land is a 1-year practice." Of course, it is. But when you pay for listing land it keeps that land from blowing away. When you are carrying out such practices, you are saving land for the next generation just as truly as you are with the construction of any kind of terrace or any other kind of structure. The public has just as much long-range interest in protecting that land from blowing away as it has in protecting it from washing it away.

So we have a public benefit. I would rather apply the test of public benefit rather than say that the test should be whether the farmer learns something or not. It is not simply a matter of knowing.

My friend, Judge Ikard, who was just sitting here, represents the district where I was reared in west Texas. That is mesquite country. Everybody knows how to kill mesquites. There is no secret about

killing mesquites today. Everybody knows that you can get more grass when you kill the mesquites. Everybody knows that it is advantageous to kill mesquites. Everybody knows that you get a better cover on your land and prevent the erosion of that land when you kill them. It is not a matter of information; but it costs money to kill mesquites. And you can go right out through the district that he represents where I used to live and find vast areas that have been killed, but they are generally on the big ranches.

Now, there are a great many more big ranches that have killed mesquites than little farmers in west Texas. Why is that? Don't tell me that the ranches knew more about it. They just happened for a period of years to have had more money with which to do it.

The big man could put in his share of the money. The Government helped. The Government did not pay all the cost. But the reason that the little man still has mesquites, when Swinson Bros. have killed their mesquites, is simply because Swinson Bros. had the money and the little man did not have the money. That is your test. That is the answer to this talk about whether the farmer is learning or not.

The farmer learned; but the farmer has got to have money. It does not do much good to tell him that it is a fine thing to grow a cover crop; he knows that. We know it in the Southwest. They know it in the South. Sure we know a cover crop is advantageous; but if you have not got the price to pay for the seed, that knowledge don't help you very much. Last fall I asked a farmer why he had not put vetch on his land. He said, "Why, I did not have the money to pay for the seed."

That is your answer about education.

The CHAIRMAN. Mr. Harvey.

Mr. HARVEY. Dr. Salter, I am from Indiana; and I am sure the experience we have both had because of the similarity of our two States gives us a great deal in common so far as our knowledge and background of the agriculture of the two States are concerned. Our time is limited. But I want to say that I have followed very closely through the years the activities of the Soil Conservation Service; and at one time, there was a soil-conservation demonstration program in the early days involving the area in which our farm is located.

There are two things that appeal to me as being criticisms of the Soil Conservation Service. And in voicing them, I want you to understand that I am voicing them in a friendly fashion too.

One, when you put it down on a per capita basis or per farm basis, the cost per farm plan that is devised by the technicians does not show up very favorably from the standpoint of service.

Number two, and I am sure this condition is being corrected—there is a tendency very often on the part of the technicians in devising a plan to provide one that is patterned almost entirely to fit conservation needs and not to fit the other factors which are just as important if this farm family is to survive, such as producing products on this farm on the basis of the plan that meets the needs of the area, producing a good product that is marketable in the area.

I have in mind a specific illustration of a farm that came to my attention that was a corn and hog farm. I think it was a good corn and hog farm. The technicians convinced this fellow he ought to convert it to a hay farm. And they did it with only conservation in

mind, and not with the other factors that were just as important from the standpoint of this farmer making the farm pay, using the buildings and facilities that he had, and the know-how, which is not the least important of the farmer involved.

Mr. SALTER. Let me comment first on the matter of cost per form. This has been a new type of program in America, this conservation program. And it has taken time to get experience in knowing how to approach the job efficiently. We think we have made considerable progress, particularly in the last few years. For example, during the past calendar year, we were able to get 11 percent more conservation applied on the land with 2⅞ percent fewer people.

We are constantly studying our techniques to see if we get a greater production per person.

The second point is one we have been very definitely aware of. The fact is that on most farms, there are several alternative conservation plans that could be followed which would achieve the conservation objective. The problem is to determine which of those alternatives is economically the best for the farmer or best suits his managerial ability. That is a place where we have fallen down at times.

We are hoping that as the Extension program becomes more closely coordinated with that of the districts, that the broader phases of farm management can be coordinated with our conservation planning in such a way that we will not make as many mistakes as may have been made in the past.

Mr. HARVEY. Well, just following that through—and I have tried to view the whole thing with a great deal of objectivity—I think the point that you last touched upon is a very fundamental one—closer integration of the activities of the Extension Service and the Soil Conservation Service.

There has not been enough of that in the past; and I am sure you recognize it as well as I. And some of those features that are essentially planning features represent a duplication of effort; and many times the technicians that come in are not as well suited to that as are the Extension people who, especially in counties where the Extension agent may have been on the ground himself for many years, has an intimate background not only of the soil production capacities of his county but also the needs, the marketing problems, the products and the ability, the productive ability, the capacities of the individual farmers to perform given tasks. All of those things are problems that I think can be solved both on the basis of economy as well as getting an efficient program and coordination of which you have just spoken.

I want to recommend most highly that your agency and the Extension Service do coordinate their efforts. I think it will bring much quicker, more economical, results, and will certainly, to a large degree, meet the acid tests so far as not only the farmer himself is concerned but the general public in demanding that they get as much as possible for their dollar invested.

Mr. SALTER. Let me say this: That has been one or my primary objectives during the past year and will continue to be in the future—to get just as much coordination as possible. And I am sure Mr. Coke shares the feeling that we need to get the Extension program and the Soil Conservation Service program geared together where they supplement each other rather than duplicate each other.

The CHAIRMAN. On that point, don't you have a considerable variation between the States as to how much cooperation there is at the present time?

Mr. SALTER. Very great differences between States, Mr. Hope.

I am proud to say to begin with, that your own State of Kansas is one of the best from the standpoint of cooperation and coordination. In spite of what the Congressman from Georgia said, we think we have about as close cooperation with all the agencies, particularly the Extension and Soil Conservation Service in Georgia, as any other State.

In fact, a great many States have excellent coordination at the present time. It needs to be improved in some States, however. In a few States there has been some antagonism particularly between people in the two agencies which has made it difficult to coordinate the work. But we are getting over that pretty rapidly, I believe.

The CHAIRMAN. Mr. Lovre.

Mr. LOVRE. I have certainly no criticism to offer whatsoever. As a matter of fact, it is just to the contrary. Out in South Dakota, Ross Davis is doing a wonderful job, and also every member on his staff. Not only are they doing a wonderful job, but they do have the cooperation of all of our farmers.

In addition to that, the Soil Conservation Service also has the cooperation of the businessmen up and down the streets of our various towns and cities. The Greater South Dakota Association—which is nothing else than a super-duper chamber of commerce—annually sponsors contests on conservation practices, and they are working hand in hand with Ross Davis, and the Soil Consrvation Service; so you are to be complimented.

Mr. SALTER. Thank you.

The CHAIRMAN. Let the Chair inquire if you can be back tomorrow, Dr. Salter?

Mr. SALTER. I could be here in the morning, Mr. Hope.

The CHAIRMAN. It is 12 o'clock. I know there are some other questions that the members would like to ask at this time. But we must adjourn. I wonder, if you Mr. McIntire, would just as soon ask your question in the morning or would you rather go ahead?

Mr. MCINTIRE. It would just take me about 30 seconds, Mr. Chairman.

I just wanted to make the observation that in almost 20 years that our State administrator, Mr. Bart Oliver, has been serving us in Maine that we have found a very definite place in Maine for the soil conservation program, particularly in our more intensive agriculture in northern Maine.

I would just like to make the comment that at times I have been a little bit concerned with what seems like an increase in paper work required of technicians. I think that the greatest evangelists that you have had, have been your district supervisors and they should, in my opinion, be given just as much authority as possible in the management and in the promotion of soil conservation in their own districts.

Thank you.

Mr. SALTER. Thank you, sir.

The CHAIRMAN. Mr. King, would it suit you as well to wait until tomorrow morning?

Mr. KING. Either way. Only I think it would take just a couple of minutes. So, I will leave it up to you.

The CHAIRMAN. The Chair has no objection if the members will stay a little longer. Suppose you go ahead.

Mr. KING. Dr. Salter, now, do you recognize that we have a big surplus of food today?

Mr. SALTER. Yes, that is right.

Mr. KING. You also believe, I assume, that producers, as long as they are producing more than the market will take, will remain in a poor bargaining position in a free economy?

Your statement was very clear in enumerating several ways in which this program had contributed to production.

How much do you think this program has contributed to the surpluses now hanging over our heads?

Mr. SALTER. I am sure that this program and also all of the programs of research and extension which have led to the introduction of increased efficiency on American farms has been a factor in contributing to this surplus situation.

We have had, as you are well aware, in years past, recurring periods of surplus and shortages associated in part with such things as war or preparation for war, and in part through succession of good reasons as against poor seasons.

I do not believe it is safe to plan the long-time conservation program of the United States in terms of the situation at any particular period.

Mr. KING. Pretty generally, however, you admit that agriculture has been in a poor bargaining position in our economy because the demand has not given sufficient price?

Mr. SALTER. At times, sir.

Mr. KING. At times.

And you also admit that our productive potential in this country as it is today is in excess of any possible demand in this country, do you not? You said so in your own statement, I believe.

Mr. SALTER. The present demand, sir.

Mr. KING. Present demand.

How can you figure that spending all this Government money for this program is benefiting the farmers when it keeps them constantly, even though it may not be the whole factor, overproducing?

Mr. SALTER. We face this dilemma in agriculture: By and large the measures which the individual farmer needs to employ to reduce his cost of production and increase his market profitably, result in greater output per acre or per man-hour or per animal.

Mr. KING. That is quite true. Just one other question.

In the interest of the future when we may have 50 million more people, in conserving soil for that future, do you know of any soil-conserving practice in existence that is better than abandonment of land and letting it grow up in weeds, the natural cover?

Mr. SALTER. If you are concerned merely with holding what we have, holding the productivity of the land itself, it doesn't make much difference whether the cover is trees or weeds or grass, providing there is enough cover there to prevent erosion.

There are many areas, however——

Mr. KING. But you said that production exhausts land.

Now, a field returned to weeds will build up without spending a cent.

Mr. SALTER. Slowly. Actually the tobacco farmers in Maryland have found that a rotation of tobacco and weeds is probably their best rotation. On the other hand, from the standpoint of conservation of the resource, if that land were growing a crop like a grass crop, some crop that is "putting in" in addition to preventing losses, it would be better than a weed crop. It adds organic matter as it grows.

Mr. KING. You do believe, do you not, that this program has contributed substantially to production in this country? And do you not believe that the money for at least the present and the next 10 years or 20 years may be wasted in that it continues to support overproduction and thereby denies farmers the compensation that they would get from a better bargaining position in a free economy?

Mr. SALTER. I am not afraid of that happening. Also, there is plenty of evidence to indicate that the farmer who follows these conservation measures does produce each bushel of corn or each bushel of grain or each pound of livestock product at a lower cost to him than if he does not follow it.

Therefore, so far as the individual farmer is concerned, his only effective method in a free economy for increasing his opportunity to make a better living is to get greater efficiency in production.

Mr. KING. Let me put it another way then.

Do you believe that farmers will be in a better bargaining position when we finally have an increased population that will demand more than we can produce? Speaking in the interest of farmers generally, not the public, will not they be better off when they produce less than the market demands, in any sort of a free system short of complete socialism?

Mr. SALTER. I am sure that the law of supply and demand is going to continue to be operating when we have more people with more demand for agricultural products.

Mr. KING. Well, then, this program will delay that day of adjustment, will it not?

Mr. SALTER. To come back to this point that for the individual farmer, his total volume times price determines his income. And if he were to revert to the technology used by his father and his grandfather, and if all of our farmers did that, the price situation would be a lot better today so far as agricultural products are concerned.

Mr. KING. Nobody wants them to revert, and they will not revert.

Mr. SALTER. But he is producing his products at a much lower per unit cost.

Mr. KING. That has not all been due to this program though?

Mr. SALTER. I realize that, sir.

The CHAIRMAN. Doctor Salter, don't you think that if Mr. King's theory were to be carried to a logical extent that our agricultural colleges should be teaching farmers how to grow scrub livestock and how to produce weeds and promoting plant and animal diseases in order to produce less so that farmers could get a higher price for what little they did produce.

Now, wouldn't that be the logical conclusion of such a program?

Mr. KING. No, not at all.

Mr. SALTER. I have never been one to see the logic of asking the farmer to produce inefficiently, using more labor for a given volume of

production, in order to meet this price situation. I think it has got to be met some other way.

Mr. KING. This has nothing to do with efficiency on the part of the farmer himself. Any smart farmer will use all of the education he has and all the information he can get from the colleges and from the Extension Service in decreasing his unit cost. That is fundamental to business in a free economy. But this program goes far beyond just efficiency of an individual farmer. It rescues farmers; it develops additional land. The overall Government program, not all of which is confined to this program, is one in stimulation and expansion of agricultural production just as if we were constantly fearful that the people wouldn't have enough to eat.

Consequently, we have too much production. And quick adjustment would be the very best thing for all the farmers who are able to survive. Now, if you interpret this as a relief program—of course, there are other arguments involved—but if you are talking about what is best for the good sound substantial farmer producing food for this country, anything that overstimulates production now is a detriment.

The CHAIRMAN. The committee must adjourn at this time. There is a roll call going on in the House.

But you will plan to be back with us tomorrow morning?

Mr. SALTER. I shall be glad to be back.

The CHAIRMAN. The committee is adjourned until tomorrow morning at 10 o'clock.

(Whereupon, at 12:15 p. m., the committee adjourned, to reconvene at 10 a. m., April 29, 1953.)

SOIL CONSERVATION AND WATERSHED PROGRAMS

WEDNESDAY, APRIL 29, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 a. m., room 1310, House Office Building, Representative Clifford Hope (chairman) presiding.

Present: Representatives Hope (chairman), Hoeven, Simpson, Harvey, Lovre, McIntire, Golden, Williams, King, Harrison, Poage, Grant, Gathings, Abernethy, Albert, Polk, Thompson, and Jones.

The CHAIRMAN. The committee will come to order. At the conclusion of yesterday's meeting Dr. Salter was still before the committee, and the Chair asked him to return today. So if you will come forward now, Dr. Salter, we will see if there are any further questions. The Chair has one question he would like to ask you.

FURTHER STATEMENT OF ROBERT M. SALTER, SOIL CONSERVATION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE

The CHAIRMAN. The Department last year worked out a program providing for smoother operation between the Soil Conservation Service and the agricultural conservation program then administered by the Production and Marketing Administration. This has been the subject of some discussion and, I am told, some confusion and friction in some of the States.

In my own State I have heard very little complaint about it, and I think it has worked out very well, except it has undoubtedly made more work for Soil Conservation Service technicians.

I wonder if you would care to comment on what your experience has been under that new program, Dr. Salter?

Mr. SALTER. I will be glad to comment briefly on it, Mr. Chairman. You are aware that under the provisions of the Secretary's memorandum 1278 the Soil Conservation Service was assigned the responsibility for giving technical service to the agricultural conservation program participants who had applied for financial assistance on their so-called permanent-type practices.

Those permanent-type practices are primarily those of an engineering type, and there had been criticism of the agricultural conservation program to the effect that the quality of the work in many of these permanent-type practices was not up to standard. The Secretary, in an effort, I am sure, to better coordinate the work of the two agencies, and also to achieve a better standard of work in the agricultural conservation program, directed the Service to service these agriculrural conservation program participants.

The Service has first, the responsibility for determining whether the practice is actually needed; secondly, we assist with the layout of the work; we supervise the construction or see that it is done properly when it is contracted, and we finally pass upon whether or not the work is up to the standards of the agricultural conservation program.

There is a provision in the appropriation act for the transfer of up to 5 percent of the agricultural conservation program funds to the Service for carrying the cost of that technical servicing. There was a provision in the Act also that the arrangements for those transfers should be worked out at the local level by the county PMA committees, and representatives of the Service and soil conservation districts.

In general, it took a little time to get the procedures into gear. In some States there seemed to be, even at the beginning, very good cooperation between the local PMA committees and the districts and the Service people so that the program started off smoothly and the necessary funds were transferred. In other areas there was a reluctance on the part of the county committees to sit down with the district and the Service people and come to an understanding as to what the amount of the transfer should be.

In many cases no transfer was made. I am speaking now of the early experience in this program.

The CHAIRMAN. This provision in the appropriation act occurred at a time previous to the Secretary's memorandum?

Mr. SALTER. That is right, Mr. Hope. That provision was put in the appropriation act before memorandum 1278 was issued. However, as time has gone on the two local agency groups—the PMA committees and the district and the Service people—have gradually worked out most of their difficulties; and at the present time I would say that the cooperation is very good in most States.

Last year, the actual transfer of funds was $1 million out of a total cost of between 8 and 9 million dollars. This current year, for the 1953 program the transfers have already amounted to something over $4 million—indicating much better coordination and cooperation.

The soil-conservation districts have not always been happy about this arrangement, and legitimately so, because in a good many cases, it has not been possible to do the work without taking our regular Soil Conservation Service employees off of the regular district program work. The agricultural conservation program servicing tends to hit peak loads at times, and it is not possible to handle it by just putting on people for very short periods. So, we have had to draw on our regular Service people for a considerable portion of the servicing.

That has not been accepted too well by some of the soil-conservation district people in some areas. But, generally speaking, I would say, Mr. Chairman, that the agricultural conservation program people and the district supervisors and our technicians are working together very well on the program at the present time.

The CHAIRMAN. If the present setup is continued as it is, I mean with reference to the relationship between the agricultural conservation program and the Soil Conservation Service program—when I say that, I mean unless there should be some reorganization—you would think it would be wise to continue the program we are talking about now, would you?

Mr. SALTER. It appears to me as a sound method of dealing with this problem. If we are going to have an agricultural conservation program through which Federal funds are made available to farmers to help pay for these permanent-type practices, certainly they ought to meet good engineering standards.

The Soil Conservation Service is the one Federal agency that has in the field the technical people qualified to give good supervision. It makes sense that we should carry that responsibility.

The CHAIRMAN. Would it make it necessary in the future for you to expand your personnel if you are going to go ahead and carry out the responsibilities of this additional work, plus your regular program?

Mr. SALTER. We handled the load very well during the past year, we believe, although there were some cases where the workload exceeded what we could accomplish because of lack of personnel.

I believe it is estimated that for the 1953 program there may be as much as 18 percent more of these permanent-type practices in the agricultural conservation program than last year. I believe, however, that the experience that we have gained in how to handle it, the increased efficiency with which we can deal with the problem this year, will probably offset that 18-percent increase.

I do not believe we are going to be any worse off than last year; and with the increased transfer of agricultural conservation program funds to support this activity, there would be less competition with the program of assistance to districts.

The CHAIRMAN. Are there any other questions on the part of members of the committee? Mr. Albert?

Mr. ALBERT. Dr. Salter, I think you have really made progress in Oklahoma where this conflict was pretty acute at times in a few localities.

Cases of conflicts have been called to my attention. We had instances that I know about where Soil Conservation personnel had given the technical assistance on, say, a pond; and if anything went sour about it—accidently or otherwise—it was just too bad. I heard about it from the PMA. They just were not getting along too well in some areas. In some counties they have always worked together.

But I think that program and the program of living together have really helped the situation in Oklahoma.

Mr. SALTER. I am sure it has generally, Mr. Albert. There are a few spots yet where there is opportunity for improvement, but we have been very much encouraged with the way the two groups have started to work together to solve their problems locally.

The CHAIRMAN. To what extent are these bad spots due to matters of personality and that sort of thing?

Mr. SALTER. I would say most of them were, Mr. Hope. Of course in both groups there are individuals who do not like to break with the past. They have developed certain antagonisms which have to be overcome. When you are dealing primarily with farmers, you cannot use the same administrative control that you do over people in the Government agency.

Mr. ALBERT. Did you have this entering the picture: Soil Conservation Service personnel were all Civil Service employees with better jobs than the average county administrative officer. I think there was a little feeling on the part of some of the PMA personnel that

probably they were doing as much work and the same type of work, and were not getting adequate pay.

Mr. SALTER. Most of our people are professionally trained and naturally get a little higher income. There was another element in it though. There was involved in this whole process some tightening up on standards as compared to what had been in existence in the past. There just had to be if we were going to actually do the job right. That caused a little trouble. But I think that most of that is over.

Mr. POAGE. Dr. Salter, as I see it, your weakest point, in my section, is the fact that you do not have money enough to hire a clerk to stay in the office. You have a crew of five men working, but they are out most of the time and there is nobody in your office; and if anybody comes in there is practically no way of communicating with them. Actually in Waco, Tex., we have more or less solved that problem by this integration with PMA. We have all of the agricultural agencies in the same building—in fact, all around the same hallway. The PMA offices are just across from yours, and they take the calls and they see visitors who come up to contact your office.

I know that in most places you do not have the physical association that we have there, and in a few places you do not have the cordial relations that we are very happy we do have. Without that close physical contact, I do not see how in the world you get anything done in the average office because you do not have anybody in it most of the time.

Mr. SALTER. We have benefited greatly where it has been possible to get together physically. As for this matter of having clerks in the office, you know, Mr. Poage, that we have been under such pressure to get people on the land helping farmers that we have had to put a major part of our resources into people actually doing the field work.

Mr. POAGE. I understand that. The only actual answer I have seen is to bring the offices together as we have in my particular community; but I know that that has not been done in a great many communities. About what percentage of your offices are in the same building with PMA offices?

Mr. SALTER. I would say it is roughly 60 percent.

Mr. POAGE. Do you not find that you get better service where you are in the same building?

Mr. SALTER. Very much better. The relations are better, and then by sharing a clerk we do have somebody in the office who can take calls and give out information.

Mr. HOEVEN. Dr. Salter, following up Mr. Poage's question about having these agencies together under one roof, is it your experience up to now that the consolidation program is working out rather satisfactorily?

Mr. SALTER. So far as getting better working relationships between the Federal agencies, very much better. In a few States, however, it has been necessary to move the State office away from a land-grant college, which is another very important contact for the Service. The service program and the Extension program need to be kept closely coordinated also.

Mr. HOEVEN. Are you encouraging the consolidation of the agencies under one roof?

Mr. SALTER. We think it has many advantages, sir, particularly at the county level.

Mr. HOEVEN. I think the intention of this committee certainly has been to consolidate the activities and prevent the overlapping wherever possible and get them together—having particularly in mind the convenience of the average farmer who should not be compelled to run around the county seat town to half a dozen different buildings to transact his business.

You mentioned the agricultural conservation program and the Soil Conservation Service. What about cooperation with the Extension Service? Is that working out to your satisfaction?

Mr. SALTER. Generally speaking, yes, in most States. It is getting better all the time. The Extension Service in many areas is working much more closely with soil conservation districts, giving them assistance in the educational field, helping them with their organization problems and that sort of thing.

As a matter of fact, Extension has done this for a long time in many areas. I sense an improvement generally over the country in the degree to which the Extension Service and the Soil Conservation Service and the districts are working together. I think it is logical. This conservation job in this country cannot be done without both the educational phase and the technical assistance phase going along together. The one is a limiting factor on the other, and the better they coordinate, the better the job is going to get done.

Mr. THOMPSON. Mr. Chairman, this is not exactly a question but an observation. Mine is another Texas district and down there we have consolidated wherever it did not cost too much money. There are lots of places where offices are located in separate parts of the community only because they were the only places we could find; and to consolidate them would mean building new buildings. Certainly the people who use the services would rather see them consolidated, and we have had no trouble except in a few isolated cases of interdepartmental jealousy. That is a matter of clash of personalities, I suppose, more than anything else.

But I think you could sum it all up by saying, except in isolated cases where it would cost too much money, consolidation, has been effective and is working very well.

Mr. SALTER. I am sure it has. One of the problems has been that in the counties, the county agricultural agent is very often in free space in the courthouse, and there is not room to move the other agencies in.

Mr. THOMPSON. That is exactly what we have found.

Mr. SALTER. It is a little difficult under those circumstances to move them together.

Mr. THOMPSON. I am glad to hear you say that generally it is working out all right, because that certainly is my experience.

Mr. MCINTIRE. Dr. Salter, could you tell me what the policy is of your office relative to the authority vested in the soil conservation district supervisors relative to equipment which they may pruchase and have available on an hourly rental basis? I am thinking particularly of the relationship of authority between your State coordinator and the directors of the districts.

Mr. SALTER. You understand, of course, that the districts are independent State agencies, and we have no administrative authority over them. Many districts have seen fit to acquire equipment to help them get certain jobs done on their cooperators' farms.

Actually, in several States funds have been provided by the legislature for the acquiring of equipment. I believe Texas split up a revolving fund of some $5 million so that districts could acquire equipment to do the jobs in the district that you cannot ordinarily get done by local contractors.

Mr. McINTIRE. But does your State coordinator have any veto power over those district directors?

Mr. SALTER. No, sir. Our assistance to cooperators is given through districts and under a memorandum of agreement between the Soil Conservation Service and the district. The memorandum does spell out certain broad requirements, but it does not enter into the field of administrative controls.

Mr. POAGE. Would the gentleman from Maine yield in that connection?

Mr. McINTIRE. Yes, sir.

Mr. POAGE. I do not know of course how it operates in other States, but as Dr. Salter has pointed out, the legislature in Texas makes an appropriation for the purchase of equipment. That appropriation I believe was $5 million last year. It was divided among the various districts of the State in proportion to their size, and they were allowed to buy equipment out of that money. It is State money and the Federal Government does not even match it. There is nothing that goes into it except State money in that respect.

Of course Dr. Salter's organization has no control over that equipment because it belongs to the districts. The State of Texas pays for it, and it belongs to those particular districts which are organized under state law and which are, of course, owned by the cooperators within the district.

We have of course in the State of Texas—and I am sure other States have a similar setup—a State soil conservation board; and that State soil conservation board has general supervision over the agreements that they make for the use of this equipment with the individual farmers. I mean it sets the policy for the use of this equipment, but it is entirely a State organization in which the Federal Government did not even put a dollar of money.

Mr. McINTIRE. I might add there, Mr. Poage, in Maine we have a similar setup, except the State puts in no money. Our districts provide their own funds, and they rent the equipment out and try to make it a sound, self-sustaining operation. But the thing that I was trying to get at, Dr. Salter and Mr. Poage, was the veto power of the State coordinator over the decisions of the district supervisors in the matter of equipment which they are buying themselves and which in their opinion can pay its way—and in my district they are excellent farm operators in themselves.

I have run into an occasion where that relationship disturbed me a little bit, because considering the high-grade farmers which were the district supervisors—and there may be details about the situation that I am not too familiar with—but it seemed that they were of the opinion that the State coordinator held a veto power over their decisions. I was interested to explore that aspect of the situation.

Mr. SALTER. I know only this situation that has occurred in a few places. The districts were naturally interested in making as much money on the use of this equipment as possible, and in some cases would use it on farms of noncooperators—farms that were not under

agreement. Of course, so far as the Service is concerned, we are limited to working with cooperators who are developing conservation plans.

Mr. McINTIRE. This issue, Dr. Salter, seemed to center around your formula as to how many pieces of equipment should be in a district with one technician. In other words, if you are going to get in an additional grader, then you have got to have another technician.

I would be of the philosophy that more and more authority relative to the jurisdiction of the problems within their district should rest in the district supervisors, and that the State coordinator should only coordinate the technical side of the program.

Mr. SALTER. That is directly in line with the policy of the Service. We want to place just as much responsibility on the local district people as possible, and our State conservationists have no administrative authority over a district. If he is trying to exercise some, he is off base.

Mr. McINTIRE. I am sure that in any instance that I have in mind there has been a difference of opinion. The objectives of both sides have been the same. Thank you.

Mr. GOLDEN. I wanted to ask Dr. Salter a thing or two and recount some experience I have had with your Service in the State of Kentucky. We had 8 districts down there for a while, and because of lack of funds, and so forth, we had to lose one of the districts and get by with 7.

In my congressional district they had to take some counties out of one soil-conservation district and put them into another. Through that I learned a great deal about what the people thought of the service that was being rendered by your Department in trying to conserve the soil and build up the farms of that section of the country.

I found out that those people were very much aware of the great service that the Soil Conservation Service people were rendering and they were tremendously discouraged because of the fact that the service was being curtailed and more counties were being put under supervisors of other soil-conservation districts. That not only extended to the farmers but it extended to all of the civic organizations and the county officials of the 18 counties that I represent.

I think instead of having too much, we have too little. From what little I know about it, I think the idea of the watershed surveys is the final answer. We have to have more of that in order that we may check the devastating floods and the soil erosion at the source. I think that it will work well with the flood-control program where they are building larger dams lower down in the streams.

This idea that was expressed yesterday that the growing of weeds may stop the soil erosion and save the country does not register very heavily with me. If the gentleman who expressed that idea would come into my district, where we have not only plains and rolling lands but mountains, and would look at the muddy water rush down these hillsides, he would think that a weed would not be very effective in stopping the destruction of our topsoil.

The CHAIRMAN. Any further questions? If not, we thank you very much, Dr. Salter.

We will next hear from Mr. Frank Parker, speaking for the Bureau of Plant Industry.

STATEMENT OF FRANK W. PARKER, BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE

Mr. PARKER. Mr. Chairman, the Agricultural Research Administration is glad to discuss with this committee the place of research in soil and water conservation. The great achievements of American industry, defense, and agriculture are largely based on research and know-how. If a company or industry wants to improve its position, it usually makes a substantial investment in research.

Research is one of the most important parts of our national-defense effort. Agriculture, no less than industry or the Defense Department, depends on research—chiefly tax-supported research—for progressive improvement and efficiency in production and conservation. There is no substitute for knowledge; there is never a surplus of know-how.

Responsibility in the Department of Agriculture for all research in soil and crop management and water management on farms was assigned to the Agricultural Research Administration last November. Previously, such research had been conducted by both the Agricultural Research Administration and the Soil Conservation Service. Soil Conservation Service still carries on important research, including work in hydrology, sedimentation, and other subjects closely related to its flood-control and soil-survey responsibilities.

The Department's soil- and water-conservation research is conducted in cooperation with the State agricultural experiment stations, soil-conservation districts, and several other agencies. There is close cooperation with the Soil Conservation Service in the determination of research needs and priorities, in the conduct of field trials, and in the introduction of research findings in farm plans.

Soil and water conservation is the use of those important resources in such a manner that they produce high yields of agricultural products for an indefinite period of time. Needless to say, such an objective has not been attained in most of the important agricultural regions of the world, including the United States. The loss of good agricultural land by wind and water erosion, depletion of fertility, physical deterioration, accumulation of salts, and by waterlogging is a common experience of many nations. It must not be permitted to continue in the United States.

Mr. Coke emphasized the importance of soil and water conservation and its place in the Department's program. Dr. Salter reviewed the progress that we have made in soil conservation and flood control. I want to indicate some of the contributions of past research and the major problems on which increased research should be directed.

Soil and water conservation practices used by farmers today are largely based on research findings of the Department, the State agricultural experiment stations, industries, and farmers. Conservation farming plans with respect to rotations, contour farming, terracing, and related practices for erosion control are largely based on research data. In 1929 the Department established several erosion-experiment stations, and such work was expanded in 1935–39. Those stations obtained the quantitative data on water runoff and soil erosion that form an important basis for farm plans in soil-conservation districts. The use of stubble mulch and other crop residues to control erosion developed from careful, painstaking, and coordinated research in several States. Tillage methods, listing and deep plowing for the

temporary control of wind erosion were developed and their applicability in various situations tested by research.

The extensive and effective use of vegetative cover to control both wind and water erosion grew out of research. For example, better plant varieties grew out of crop-breeding research, better fertilizer practices out of soil-management research, and good cultivation out of tillage research. These and other practices developed through research provide us with the know-how to produce good cover for reducing erosion. Every conservation farmer, county agent, and technician of the Soil Conservation Service is utilizing the results of soil and water research in meeting everyday farm problems. We in research are proud of our contributions. We feel the tax dollar in soil- and water-conservation research has paid high dividends, but there are still too many problems for which we do not have good answers.

What are some of the major problems that must receive attention of the State and Federal research team? I shall discuss a few.

One of the important problems relates to the management of crop residues to control erosion without impairing crop yields. Research and farm practices have shown that residues left on the soil or incorporated in the surface help to control soil erosion and decrease water runoff. In most instances, however, the practice reduces crop yields. Why? It may be due to one or more factors. The available nitrogen and phosphorous in the soil may be reduced by the decomposition process. The untilled soil below the residues may get too little air for healthy root growth. It may be that yields are cut by insects or diseases harbored in the surface residues or by more weeds than would otherwise compete with the crops.

We need studies on the rate and placement of fertilizers in or under surface residues, improvements in tillage and planting methods and equipment, and studies on weed, insect, and disease-control methods. We are confident that through such research we can secure the benefits of crop residues and eliminate the unfavorable effect that they frequently have on yields.

In the humid region we have found that water conservation is associated with vegetative cover. More recently, however, we find that on many pastures soils have become so compacted that water runoff is excessive. The pastures may suffer from the lack of moisture and at the same time be ineffective in minimizing floods. How can we get more water into our pastures? We do not know because there has been little or no research directed toward this situation. It may involve limited tillage, better management, increased fertilization, or the development of better pasture grasses and legumes.

Soil compaction in pastures is largely due to livestock, but much of the objectionable soil compaction in row and grain crops is due to frequent use of heavy farm equipment. Mechanization has brought its problems as well as its benefits. We must determine those soil conditions under which serious compaction is most likely to occur and find ways to overcome or minimize compaction troubles. The problems require increased attention on the part of soil- and water-conservation workers and the farm-equipment industry.

The place of pastures in a rotation has not been adequately studied in many parts of the country. We all believe that pastures improve the fertility and physical properties of the soil. For example, at

Scotts Bluff, Nebr., corn, the fourth crop following brome grass pasture, produced 114 bushels per acre without fertilizer. Just where do pastures fit into rotations on the high plains of Texas, in the Southeast? How long should an area be in pasture for maximum beneficial effect? Do pastures improve all soils, or are there certain types of soils which should be in pasture more frequently?

A very important problem relates to the place for legumes and commercial nitrogen in soil management and crop production. Legumes have been an important crop in our better rotations, often occupying from 25 percent to as much as 60 percent of the acreage of a farm. They provide nitrogen and organic material, and improve soil tilth and drainage. More recently, research teams have demonstrated that high yields of grain crops, notably corn, can be secured through greater use of nitrogen fertilizers.

For example, in North Carolina we have produced more than 100 bushels of corn per acre over a 9-year period on well fertilized land cropped continuously to corn. This same land, unfertilized, would produce less than 20 bushels of corn. High-yielding grain crops also return a lot of organic matter to the soil.

Is it feasible to have land in grain crops a high percentage of the time if it is adequately fertilized and if the crop residues are properly managed? How about the erosion hazard? This practice may be good on level land, but can it be safely followed on land with a 2-, 5-, or 10-percent slope? Will heavy corn production result in the deterioration of the physical properties of some soils? If so, how many years of deep-rooted legumes will be required to restore the land? These are some of the problems that arise from replacing legumes with chemical nitrogen. Extensive experiments are needed to provide the answers for a wide range of soil, crop, and climatic conditions. Results on a sandy-loam soil in North Carolina may mislead farmers in Illinois or Iowa.

We have limited data indicating that heavy fertilization of crops may greatly reduce water runoff and erosion. It appears that the same combinations of good soil and crop management practices that have increased crop yields 40 percent since 1940 have reduced the erosion hazard. One of the important research needs is a quantitative evaluation of water runoff and erosion losses under current and prospective soil- and crop-management practices. It seems entirely possible that at high levels of fertilization cropping systems may be altered to include more row crops without increasing erosion; but our data are too inadequate to recommend such changes now.

The soils of the Great Plains are steadily deteriorating. During 30 or 40 years of cultivation they have lost one-third to one-half of their nitrogen and organic matter. To date there has been no cropping practice found which will maintain the organic matter content of these soils. Associated with loss of organic matter is usually a deterioration of soil structure, loss of plant nutrients, decreased infiltration, and increased erodibility.

Fertility problems are fast becoming important throughout this area. However, moisture conservation and erosion control are still the major problems of the Great Plains region. Only about 25 to 30 percent of the precipitation which falls is used for crop production. Five to ten percent is lost in runoff; 60 to 70 percent is lost by evaporation, especially where fallow is a common practice.

Little if any quantitative data is available on methods of reducing evaporation loss, yet the major portion of the precipitation is lost in this manner. We must frankly admit that we do not have the answers to soil and water conservation for the Great Plains. In all probability we will not get these answers until we have a basic research program on the reduction of evaporation losses. If evaporation losses could be substantially reduced, many of the related problems of fertility, and especially of wind erosion, would be partially solved.

Large acreages of irrigated land have gone out of production due to the accumulation of salt or alkali. On even larger acreages still being tilled, salt and alkali have reduced the crop yields 20 to 40 percent. This can only be avoided by improving irrigation and drainage methods developed with due consideration for water quality and soil type. Research in this field has prevented some mistakes in irrigation project development and is pointing the way to successful development in other projects. The scope of the work, however, is not adequate to meet the needs of farmers, soil-conservation technicians or the Bureau of Reclamation.

In the irrigation agriculture of the Western States, a major problem is the efficient use of water. There is far more suitable land than available water. Water is scarce, but less than one-half of the water taken from the reservoirs or streams actually reaches the farm and is used by the crop. Such low efficiency of water use should not be continued. Not only is there a loss of water to the farmers, but where deep percolation is a problem, there frequently is created on adjoining land a drainage problem which may result in salt and alkali accumulations that reduce crop yields or possibly even cause abandonment of the area. Better methods of irrigation must be developed through research. A good beginning has been made and improved practices are in limited use, but much remains to be accomplished.

As previously indicated, it was less than 6 months ago that full responsibility for the Department's research on soil and crop management and water management on farms was assigned to the Agricultural Research Administration. For the last 4 months our staff has been meeting with the staff of the State agricultural experiment stations and the Soil Conservation Service. We are reviewing soil and water research and needs in each State. We have been impressed by four things: First, the extensive and rapid incorporation of research results in the conservation program; second, the inadequate facilities and staff on many important research projects; third, the many problems presented by field personnel who are dealing with farmers almost every day; and fourth, the lack of research on important problems.

There can be no question that the farmers and the men on the firing line to help them need the support of a strong research program. That program must be developed to give answers to practical farm problems. This applied research should be supported by a strong forward-looking program of basic research. Currently there is very little basic research in soil and water conservation. On most projects, staff and facilities are inadequate for making quantitative measures of changes in soil and moisture conditions. Only crop yields are recorded. There is little or no research on some important problems and in some important problem areas.

The importance of research on soil and water conservation on farms to flood control is obvious. If peak runoff and erosion are reduced on farms, floods and silting of streams and reservoirs will be reduced. Research, however, should not stop with problems on farms. There is a great need for hydrologic, watershed management, and related research to help guide our flood-control program.

We could discuss more of these important problems on which research is needed. One fact, however, is quite clear. The solution of most problems will not come from a change in practice—liming, fertilization, a new tillage practice, or the introduction of a new crop. Most, if not all, problems will be solved by developing better combinations of several old or new practices. For example, the development of better methods of water disposal in the Southeast will probably involve the use of new grasses in meadow waterways, higher levels of fertility, new seeding practices, and changes in terraces or water disposal from each row; and it may make adjustments in the farm enterprise desirable in order to effectively utilize more forage.

Further research in soil and water conservation, therefore, will require State-Federal teams of soil scientists, agronomists, and agricultural engineers. Such teams can get the answer to many of our problems. As in the past, research can point the way to soil and water conservation and efficient production.

I want to close this statement by quoting from Secretary Benson's recent address, "The Challenge—Research," before the National Institute of Animal Agriculture:

> Research has made our country strong. * * * The research of today shapes the welfare of our country tomorrow and, indeed, the welfare of all free peoples everywhere. Truly, knowledge pays the best interest.

The CHAIRMAN. We thank you very much, Mr. Parker, for your statement. Am I to infer that most of these problems you mention have been the subject of research only to a slight degree, or not at all? Is that correct?

Mr. PARKER. That is substantially correct. Most of the problems have received a limited amount of attention, maybe in one State or maybe in two States. They have not received the amount of effort that the problem warrants, and the problem is not one that can be solved in one location for all other locations.

The CHAIRMAN. What are the States doing, generally speaking, in these times with respect to expanding their appropriations for agricultural research?

Mr. PARKER. Over the past 6 or 8 years the States have received substantially greater increases in appropriations than the Federal Government agencies.

The CHAIRMAN. You have not received any, have you?

Mr. PARKER. Very little, that is right. It appears now, however, that the appropriations to the States are leveling off.

The CHAIRMAN. I assume that you could use more money, but what I am interested in is how fast could you use more money in agricultural research? In other words, how fast can you get personnel? How fast can you set up projects that you feel are needed?

Mr. PARKER. Our greatest need is for personnel to help the scientists that we have on the job now. Ten years ago a scientist had 4 or 5 men in the lower grades to help him. Now he has one. So we could use a great deal more money to employ labor, subprofessionals, or junior scientists to help our present staff.

The recruitment of senior staff does have its limitations. The Research Policy Committee of the Department, however, has looked at that matter very carefully; and in a recent report have indicated that they do not believe that it is a serious handicap in the next 5 or 6 years.

The CHAIRMAN. That is the recruitment of senior personnel?

Mr. PARKER. That is right.

The CHAIRMAN. I understand you to say, then, that the recruitment of junior personnel and the semitrained or semiskilled people would not be too much of a problem. Is that right?

Mr. PARKER. It would not be a serious problem at all.

The CHAIRMAN. Then your basic trouble is lack of money.

Mr. PARKER. The basic trouble is lack of money.

The CHAIRMAN. Any other questions?

Mr. HOEVEN. In that connection I would like to know just how much money you are getting for your Department.

Mr. PARKER. The total appropriation for Soil and Water is in the neighborhood of $2,000,000.

Mr. HOEVEN. How much do you need to effectively do the job?

Mr. PARKER. Well, sir, we could very readily and very quickly use twice that amount of money. We are now, as I have indicated in this statement, making a State-by-State review of current projects and research needs. With the completion of that review and working with the land-grant colleges, we expect to have a research plan that looks ahead for, let us say, 3 years, with a money figure put by it.

Mr. HOEVEN. I do not think there is anything more important than agricultural research. I am rather surprised to learn that you have inadequate facilities and an inadequate staff. Also, that you are unable to carry on research on important problems; and that in some areas nothing has been done. I was under the impression that we were getting along rather well in the agricultural research field.

Mr. PARKER. In the case of work on soil and water, Mr. Hoeven, the support has been very inadequate. The support of soil and water research formerly conducted by the Soil Conservation Service has not changed in dollar figures since 1940. They were getting about $1,500,000 in 1940, and that is what it is in 1953, with the dollar worth about half as much.

Mr. HOEVEN. Do you have difficulty in getting trained personnel?

Mr. PARKER. No, sir; I do not believe that is a handicap.

Mr. HOEVEN. That is not a problem?

Mr. PARKER. That is not a problem, with any reasonable expansion.

Mr. ALBERT. How far are private endowments going into this field? In my district Lloyd Noble set up a foundation. I think part of its job was agricultural research. Is that not true?

Mr. PARKER. That is right.

Mr. ALBERT. Is that a movement that has any nationwide significance?

Mr. PARKER. It is important in a few places; but, on the whole, nationally it is relatively unimportant. It is heartily welcomed, and certain industries have made some contributions in this field—farm-equipment and fertilizer industries.

Mr. ALBERT. But the job is being done now primarily by the State and Federal Governments?

Mr. PARKER. The job is essentially being done by the State and Federal Governments.

Mr. HARRISON. Mr. Parker, in furthering the question of Mr. Hoeven, is the amount of money that is given to the States adequate at the present time, and is there not a spirit of cooperation between the Federal and the State organization, the State experimental stations at the present time, and have they not gotten a greater percentage of the money that has been appropriated?

Mr. PARKER. The States get money from two sources—Federal grants and direct State appropriations; and the State appropriations greatly exceed the Federal grant money.

Mr. HARRISON. If you were to carry on a greater program, would it be in cooperation with the State experimental station or would it be a Federally financed program?

Mr. PARKER. It would be directly in cooperation with the State agricultural experiment station. All of our work is so carried on. We have, for example, in each of the four land-grant college regions a regional soil research committee with representatives from all the States; and we plan our programs with that group, with one of the directors participating.

We are housed with them; we live with them; we work with them.

Mr. HARRISON. But you could use an additional two million dollars?

Mr. PARKER. Very readily.

Mr. HARRISON. On page 5 of your statement you say:

> In North Carolina we have produced more than 100 bushels of corn per acre over a 9-year period on well fertilized land cropped continuously to corn.

Are you familiar with that particular project?

Mr. PARKER. Yes, sir.

Mr. HARRISON. What was the terrain of the land?

Mr. PARKER. The land was level.

Mr. HARRISON. Did you encounter any diseases in that period of time such as we would encounter if we raised hogs in the same lot for a period of 9 years?

Mr. PARKER. No. We have had some leaf spot trouble in years of high rainfall; humidity. We had just as much trouble the second year as we had subsequently. Problems like that can be pretty well handled by the plant breeder if it is necessary. They just breed a disease-resistant hybrid.

So from the standpoint of the success of continuous corn production in that experiment, there is no evidence whatsoever but what it is perfectly feasible.

Mr. HARRISON. To raise corn on the same ground year after year on level ground? The reason I speak of level ground, I think there is a tendency on hill ground probably to wash a little more, and it needs to be protected by legumes.

Mr. PARKER. Yes, that is the question I raised—on what kind of a slope and on what soil types can you introduce this practice? Remember, if you raise 100 bushels of corn, you have got a pretty thick stand, 12,000 to 14,000 plants per acre. You have got a lot of residue. If you go into field with a shredder, after you have picked the corn you leave quite a blanket of cornstalks and fodder that form a good mulch and give a lot of protection against erosion.

But we have not done enough work to know where that is applicable. In the reviews we have had with the States, whether it be in Texas,

Indiana, Alabama or Missouri, those are the kinds of questions that are being raised.

Mr. HARRISON. That is very interesting. Thank you very much.

Mr. THOMPSON. Mr. Parker, I was very much interested in your statement about the amount of precipitation lost in evaporation—60 to 70 percent. I did not realize it could be that high. In your experiments, do you not find that the building of dams in the upper reaches of the country and consolidating the water in a smaller area cuts down evaporation?

Mr. PARKER. I do not have any information on that; I am sorry.

Mr. THOMPSON. It would seem so, would it not? The spreading out of any body of water increases evaporation because evaporation comes from the surface that is exposed to air and sunlight. Is that not right?

Mr. PARKER. That is right. Your greatest evaporation is from a free water surface.

Mr. THOMPSON. Then the plan we have in mind, building more and more upstream dams, on-the-farm dams, ought to help that, I would think.

Mr. PARKER. I am not sure that it would reduce evaporation.

Mr. THOMPSON. It seems to me to stand to reason that if you consolidate your water quickly when it falls, then you would have it in a more restricted area and so the evaporation would be cut down.

Mr. PARKER. Even though your evaporation increased, you would probably retain more usable water because it has not gone downstream. But as you increase the free water surface, I think you will increase the evaporation loss.

Mr. THOMPSON. We are going to decrease it, get the water in a hurry down behind a dam and develop a pond. I think that you find that that will help the evaporation problem.

Mr. PARKER. That points up one problem that was only mentioned in this statement very briefly. There is great need for hydrologic work so that we do have a complete picture of precipitation, runoff, infiltration, stream flow, all of that type of thing. That is the part of research that I indicated is still a responsibility of the Soil Conservation Service. It is so closely related to the flood control.

But I know enough about it to know that that is one of the very weak points in the whole research program. I believe I am correct—and if I am in error I would like for Dr. Salter to correct me—there are only 3 hydrologic stations in the United States operated by the Soil Conservation Service, and maybe 2 by the Forest Service.

Mr. THOMPSON. What is the nature of the work done in a hydrologic station?

Mr. PARKER. I have indicated that that is out of my field of responsibility and somewhat out of my knowledge. Possibly Dr. Salter would like to comment on that.

The CHAIRMAN. Perhaps we can develop that later from Dr. Salter or from some other witness.

Mr. LOVRE. How much research has been done in connection with irrigation? In our State we have discovered large quantities of underground water. Now the question is: Is it economically feasible for a farmer to go into that and tap it and put up his own sprinkling system? Has there been much research done with acreage water?

Mr. PARKER. That is a very common practice. Might I ask you what your State is?

Mr. LOVRE. South Dakota.

Mr. PARKER. In Texas, for example, there are hundreds of thousands of acres irrigated by pump irrigation. It is common in many of the Western States. The research on pump irrigation is similar to all other irrigation research. It involves the efficiency of water use and the methods of application and all of that.

In addition to that, however, you do need to have the information of the underground water supply, and that is ordinarily handled by the Geological Survey. They have a Ground Water Division.

Mr. LOVRE. In places like Texas it has proven successful and feasible?

Mr. PARKER. Yes, sir. There is very large acreage of irrigation by pumps.

The CHAIRMAN. Any further questions?

Mr. JONES. Mr. Chairman, are the Federal grants for this research contingent upon State appropriation, and are they allocated on a matching basis?

Mr. PARKER. Not generally. The Federal grants are to the States, and I do not believe that there is any matching involved. Dr. Elting, who I believe is the next witness, is from the Office of the Experiment Station; and that office handles the Federal grants. He could correct me if that is wrong.

The CHAIRMAN. To what extent are business institutions and other commercial institutions that depend at least partially on agriculture for their business going into agricultural research? For instance, you made the statement a while ago that very little was known about the effect of compaction on land. You say you know it causes water runoff, but there has been no research directed to what can be done to prevent compaction from heavy implements.

Are the farm machinery companies themselves doing anything along those lines?

Mr. PARKER. I am not sure whether they are or not, Mr. Hope. They have cooperated with the research administration at the tillage laboratory at Auburn on the design of tractor tires and compaction measurements are being made. The degree to which they are making that study themselves, if they are, has escaped my knowledge.

The CHAIRMAN. You have ample authority, do you not, to work with private organizations in research matters?

Mr. PARKER. Yes, sir.

The CHAIRMAN. Either by contracting with them or by collaborating with them?

Mr. PARKER. Yes, sir. Industries in general are doing a great deal of research that is important to agriculture in the development of new products and agricultural chemicals. And they support by research grants quite a lot of work at the State agricultural colleges.

The CHAIRMAN. That work, generally speaking, is conducted so that there is a relationship with the work of the State and Federal agencies in this field?

Mr. PARKER. Yes, sir.

The CHAIRMAN. You do not have any trouble establishing a good relationship with private research and industrial research organizations?

Mr. PARKER. None whatever. I might point out one instance. The phosphate fertilizer industry in recent years, over a period of 4 or 5 years, has contributed about $80,000 to a coordinated research program on phosphorous fertilizers. There is quite a lot of industry support for research at the agricultural experiment stations.

Mr. HARVEY. It is true, is it not, Mr. Parker, that one phase of agricultural research—that is, the field of plant breeding, developing better varieties and greater disease resistance and greater yielding capacities—has further complicated the problem with regard to soil conservation, and water, too, because they have actually constituted a bigger and better pump on the soil?

Mr. PARKER. That is right.

Mr. HARVEY. And while the immediate results, of course, are very evident, particularly as in the case of hybrid corn where we get, in changing from conventional to hybrid corn, immediatley a much larger yield, actually we are just putting a bigger pump on the land. So it would seem to me that the very developments that have come about through research and plant breeding have in the long run a very definite effect upon the soil resources, and of course eventually the water resources, too.

Mr. PARKER. The case of hybrid corn and nitrogen is an excellent illustration of that. Hybrid corn comes into the picture, and it increases yields 20 percent. That throws such a strain on the soil to supply nitrogen that the net effect is, while you get 20 percent more corn, the protein content of that corn dropped about 10 percent.

Mr. HARVEY. I think there is one other factor that deserves the attention of research and probably will necessitate coordination with the Geological Survey Division. That is the ultimate effect of the increasing demand upon the subsurface moisture supply. I have in mind a situation that exists in my area where we have industry coming in and demanding great quantities of water in agricultural areas. The agricultural folks are interested particularly in farming and are much concerned over the ultimate effect of the rapid dropping of the subsurface water level.

I would certainly recommend to you that some consideration in your whole research program be given to that phase. Frankly I know that there must eventually be some impact. I have no idea what it will be. Of course the same thing applies in areas such as Mr. Lovre described in Texas, where tremendous demands for irrigation purposes are made upon the subsurface water levels. I think we need to know a great deal more about those problems, because we may be getting some gains now that could ultimately result in a severe loss to our total productivity.

Mr. PARKER. I am sure that the Department and the Geological Survey are both aware of the seriousness of that problem. It is an acute one.

Mr. HARVEY. You are working in cooperation with them?

Mr. PARKER. That is right.

Mr. HARVEY. Have you coordinated fairly well your program to distribute research problems with the various land-grant colleges?

Mr. PARKER. Yes, sir.

Mr. HARVEY. You are getting excellent cooperation from them? You know the problems vary from one end of the country to the other. As you indicated in your statement, the lessons you might learn in one given area would not be applicable to another at all.

I think you are to be complimented upon the fact that you have distributed your research program, because the problems are almost as varied as the answers.

The CHAIRMAN. Your statement has been very interesting, Mr. Parker. The next witness is Mr. Erwin C. Elting, of the Office of Experiment Stations.

STATEMENT OF ERWIN C. ELTING, OFFICE OF EXPERIMENT STATIONS, UNITED STATES DEPARTMENT OF AGRICULTURE

Mr. ELTING. Dr. Parker has described in considerable detail the role of research in furthering our total effort in soil conservation. It is my purpose to supplement his remarks by discussing the potential of the State agriculture experiment stations in this total research effort and to look at some of the assets and some of the limitations that pertain to the experiment stations in assuming a full partnership in this research effort. Some of the questions which have just been directed to Dr. Parker indicate the interest of this committee in the role of the experiment stations.

I am sure that each member of the committee is fully familiar with the organization and operation of the agricultural experiment stations as a department of the land-grant college in his State. Also, the fact that the experiment stations are supported jointly by Federal-grant funds and by State appropriations and other funds of non-Federal origin.

Throughout the discussion the cooperative nature of this undertaking has been emphasized; and certainly when we think of agricultural research, we invariably think jointly in terms of the research agencies of the Department and the State agricultural experiment stations which jointly comprise our major research force in this Nation.

The question of support has been raised, and it is interesting to note that the stations have received substantial increases in State support, particularly during the postwar years. The States were providing in 1946 about $21 million a year; whereas in 1952 they provided $57 million, which has amounted to an increase of roughly $6 million each year during the postwar years.

During that period the Federal-grant funds have increased at a much smaller rate so that, whereas the ratio of Federal-grant support to non-Federal support in 1946 was $1 to $2.89, in 1952 that ratio has broadened to $1 of Federal grants to $4.42 of State funds—indicating the greater appreciation at the State level of a strong and well-supported agricultural research program.

What do the States have to offer in the way of facilities that can expand and facilitate our efforts in the field under consideration? In the first place, they have some 7,200 trained personnel, approximately half of which are engaged fulltime in research; the balance of which are jointly engaged in teaching and research. The stations have land, laboratories, and certainly a strong administration with a background of cooperative planning and execution of research that is very important as we view this job ahead.

During the past 6 years the States have actually established 220 new branch stations or outlying research centers, which means they are equipped now to reach into most of the major problem areas in the

States with a well-established base of operations. That 220 is added to some 250, which previously existed, so that there are today actually 470 permanent or semipermanent research centers maintained in our State experiment station system.

It is difficult to appraise just what portion of the total program of the experiment stations is directly applicable to the conservation effort. Some 8 percent of their total resources is devoted directly to soil research. Certainly we would say a major part of that has a very direct bearing on conservation. In addition, there is wide effort in the field of forage and pasture crops amounting to some 7 percent of the total effort. Fifteen percent to other field crop research; some 30 percent to all phases of animal production research. In addition, strong programs in the field of mechanization, in farm management, in insect and disease control, which contribute to the total program. A major part of that does have a bearing on our conservation effort.

The State experiment stations are certainly keenly aware of the need for an expanded program, as indicated by projected needs. They projected for the year ahead a total increased need of some $12.5 million, which within the limits of their present facilities could be effectively used. About 20 percent, or one-fifth of that total, was in the field of soil conservation and management—indicating that they foresee major needs in that area.

If I may, I think we could illustrate it no better than to quote directly from statements that have come from directors of experiment stations as they have pointed up the need for an expanded program. The director of the Arizona experiment station states:

> Penetration of water in Arizona soils is a problem of great significance, in a State where almost every cultivated acre must be irrigated. Frequently after even 2 or 3 years in production, the penetrability of some Arizona soils is greatly reduced, leading to reduced yields and a wastage of irrigation water. Research designed to meet the problems is urgently needed in several areas of investigation—soil amendments, fertilizers, cultural practices and cropping systems.

The director of the Indiana station states:

> A real bottleneck in crop production in Indiana, and for that matter in much of the Corn Belt, is soil structure. Putting in drainage has only partially solved the problem. Until we know more about soil structure, how to improve it and maintain it, we cannot expect to obtain maximum efficiency expressed in crop production out of land drainage and fertilizer application. Attacking this problem is a costly procedure. Thus only the surface is being scratched in Indiana and elsewhere in the Corn Belt States.

The Iowa director states:

> Need to correlate facts gained from soil tests with field response from recommended treatments, soil-type studies to delineate areas with similar physical, chemical and biological properties, factors affecting erosion and methods of control, particularly the effect of land-use treatment on runoff and erosion from watersheds in relation to flood control, crop rotations and fertility practices on different soil types to maintain and increase production.

The director of the Michigan station particularly points out the need there for greater effort on the organic soils of the State, which create many unusual problems. The director of the Nebraska station has outlined his needs as follows:

> Nebraska has reached the place in its agricultural development where a considerable increased research program is necessary to cope with problems of soil erosion and the improvement and maintenance of soil productivity. The contemplated doubling or more of the acreage of irrigated land within the next few years makes these problems particularly pressing.

The Pennsylvania station states:

> During recent years thousands of miles of tiled drainage ditches have been constructed in Pennsylvania and similar expenditures for the irrigation of cropland are under way. Too little scientific information is available relative to the food producing value of either practice, although both look promising. A careful study of mains and results of the timely application to or removal of water from cropland might increase food supplies near large consuming centers enormously.

The Washirgton station states that an estimated half-million acres of former pine-producing lands in eastern Washington are lying idle because of failure of natural tree growth to reestablish itself after the original growth on these areas has been harvested. These areas represent various conditions of site deterioration ranging from eroded areas, with scant vegetative cover of sparse chief grass, to those heavily invaded with woody shrubs. This area demands greatly increased research to learn how to reestablish crops in such areas.

Those, Mr. Chairman, are excerpts from some of the stated needs; but they do outline clearly the appreciation on the part of the State directors of the need for assuming a larger role in this important research field. I think it is important to note that from the beginning of organized effort in soil conservation research, the stations have provided a major part of the physical facilities through cooperative effort and a substantial portion of the total cost. So there has been the most effective type of cooperation.

Many of these problems transcend State lines, and it is at that point we find an effective regional organization among our experiment station administrators which has proved its worth many times in attacking broader problems of watershed and river basin developments. In each instance in which programs have been authorized within large watersheds or river basins, the experiment station administrators have promptly created committees which could work with the Department agencies in jointly planning a program of the magnitude necessary to attack the problem.

It is well illustrated by recent efforts in the New York-New England area, where some 14 study groups were created there to envision the problems in many different areas involved; and well-developed plans have been drawn—although admittedly many of them cannot be put into effect until greater support is available.

Just a word on the present outlook for support ahead. We have no way of knowing at this stage whether the State level of support will level off. As I stated, it has tended, since the war, to increase at a rather constant rate each year. In some cases we have evidence now that that trend is being reversed, or that the level of State support will become stable.

The CHAIRMAN. Right on that point, you are getting a little more money, but are you getting any more research? Is the cost going up faster than the funds which you receive?

Mr. ELTING. So far as the Federal grant funds are concerned, despite the increases which we have gained under the provisions of the Research and Marketing Act—which to date has amounted to $5 million annually for payments to States—it is evident that we have a lower purchasing power with the Federal grant appropriations today than we had in 1940.

The State funds have more than tripled in that period, so obviously we have had some increased buying power with State funds. To

counteract that increase has been this rapid expansion in the number of locations or centers for conducting research. And, as you know, those frequently represent actions of State legislatures in creating new substations. It represents an appeal, I think, from the farmers in major problem areas in the State to have research done in their local communities which obviously can be more directly applicable to their problems.

So, despite any increases, I would say we are spreading our efforts more thinly in trying to serve more areas than we were 10 years ago. And there is considerable evidence that this process has had a depressing effect on our program of basic research; that despite our increased dollars, we are not doing the job, particularly at the main stations, in the area of basic research that the problems warrant and demand.

Mr. ALBERT. Do you think if we stepped up appropriations here there would be a tendency on the part of the States to stop this progressive increase of appropriations year after year that we have seen in the last 10 years?

Mr. ELTING. If we can look at history, we would say no, there has never been a case when Federal grant appropriations have been increased but what there was a correspondingly greater increase in State funds. If we look back to 1925, when the Purnell Act was passed as that authorization matured over a 5-year period, we witnessed a great expansion in State support. And again, since 1946, with the passage of the Research and Marketing Act, where Federal funds have increased $5 million, non-Federal support has increased more than $30 million over that same period.

So I think it has tended often to provide an additional stimulus for greater State support.

The question was raised as to the matching requirement for the Federal grant funds. Actually the Bankhead-Jones fund and the amendment to the Bankhead-Jones Act both have matching requirements. So out of our present $12.5 million of Federal grants, about $7 million of that total does have a matching requirement. However, I think it is obvious that matching is not a serious problem when the States are putting up nearly $4.50 for each $1 of Federal grant money.

There is in this year's budget a $1 million increase in the Federal grant which, if allowed, would represent the first increase in Federal grant support in 5 years. That fund has remained constant during the past 4 years at about $12.5 million per year.

A question was asked as to how much industry may be putting into this program. It is interesting to note that industrial grants last year to the experiment stations amounted to over $5 million, or roughly 10 percent of the non-Federal budget of the experiment stations. I do not have a breakdown as to how much of that is directly applicable to soils or conservation research, although I am sure it is substantial. But it does indicate a growing interest on the part of industry to contribute to the support of these research programs.

I have attempted to outline the appreciation that the stations have of the need for strengthening their program. I think that lack of adequate support today is the major obstacle to development of a program that would attack many new fronts. As Dr. Parker stated, we envision the greatest need in personnel as an increase in the number of junior scientists who could aid our present senior technical staff, which certainly is capable of planning and directing a much larger program if they had additional aid from junior scientists.

Those cover the main points, Mr. Chairman, that I hoped to discuss in the area of the States assuming a full partnership in this research job.

The CHAIRMAN. We thank you very much for your statement. It is interesting and very helpful to the committee. I think perhaps you have covered it as you went along, but I am not quite sure just how in all cases you relate your work which deals with soil conservation with the activities of the Soil Conservation Service or the local soil-conservation districts.

In the main, do you disseminate your information dealing with conservation to the public through the Extension Service and through its connection with the soil-conservation activities? Or just how do you operate in that field?

Mr. ELTING. The most important channel there, I am sure, has been the very nature of organizing the research program since such a high percentage of it is directly on a cooperative basis, and the Soil Conservation Service has had a vital place in the planning of much of the research and certainly in presenting their needs in the planning of the research that would serve some of their most critical problem areas.

Certainly the Extension Service is also highly important in carrying these findings to the farmers and to the operators of programs. The close relationship which exists between the Extension Service and the experiment stations in each of the States provides a constant flow of information there. But so far as being able to focus on the problems with which the Soil Conservation Service is most intimately concerned, I think cooperative planning is the major answer to the question you have raised. There are definite channels established by which their needs can be made known to the research agency.

Of course in the past the Soil Conservation Service has been responsible for an area of research there and, as I said, practically all of that has been developed and conducted in cooperation with the States. So naturally then the flow back has been through direct channels.

The Office of Experiment Station, which I represent, represents the Secretary of Agriculture in the administration of the grant funds and is charged with the coordination of effort among the States and between the States and the Federal agencies engaged in similar lines of research. So there is a constant effort directed to this area of coordination that is important, and part of that program certainly envisions the dissemination of information through appropriate channels so that it will get back to the farmer, to the operating programs that are dependent on it.

The CHAIRMAN. I think that answers my question very well. Mr. King?

Mr. KING. In working on this program with many colleges and experiment stations, is there a possibility that there is wasteful duplication, with maybe a dozen institutions carrying on exactly the same study and experiments?

Mr. ELTING. That question, of course, is raised very often. The statement I have just made of our efforts and responsibilities in coordination certainly bear directly on your question. It is obvious, I think, when you appreciate that 80 percent of the support to the States is from non-Federal sources, that the Federal Department has some limitations in program coordination, because much of that money is

expended under the direction of State officials and the Federal Government exercises no authority over its use.

But there is excellent cooperation on the part of the States. Our office is provided with detailed statements of all work and progress. We do maintain a central project record, a continuing inventory of research and progress. And the States rely a great deal on the project records which we maintain as a source of information as to what other States are engaged in similar lines of research.

A great deal of our effort deals with informing States that are planning new research what other research is in progress that relates to their needs and plans. Then I have already explained the regional organiaztion among directors where they meet at least 2 or 3 times annually to exchange ideas and discuss problems.

In many areas we have regional technical planning committees established that are another effective avenue for preventing duplication. So by and large I do not think the problem you have mentioned is a very serious one.

The CHAIRMAN. Any further questions? If not, we thank you very much, Mr. Elting.

We will hear next from Dr. C. M. Ferguson, Director of the Extension Service. Dr. Ferguson, I believe this is the first time we have had the privilege of having you before the committee. We are happy to have you here. We will be pleased to listen to what you have to say this morning.

You may proceed.

STATEMENT OF C. M. FERGUSON, DIRECTOR OF EXTENSION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE

Mr. FERGUSON. Thank you, Congressman Hope. I deem this quite a privilege to sppear before your committee.

The Cooperative Extension Service of the Department of Agriculture and the land-grant colleges and universities have a very active interest in conservation in its broadest aspects as well as in its particular phases. Extension work, growing out of the local peoples' needs, has from the very beginning recognized the importance of conservation of soil, water and forest resources. This has been from the standpoint of the individual farmer, as well as the public interest. Because of the diversity and complexity of farm problems with which Extension has had to deal, special conservation educational efforts have had to share with all other important demands for the service of extension agents, or be carried on as a part of the broader total effort.

In recent years with the growing public recognition of the importance of conservation to the national welfare, the Extension Service has diverted all resources it could to dealing with these problems in a more intensive and organized way. In addition to assisting farmers in the organization of soil-conservation districts, and education work in districts after formation, Extension has intensified its work with individual farmers on their conservation problems.

In all this work we have been guided by the firm belief that real conservation only is attained when the individual farmer becomes convinced that it is economically profitable to him. He not only must be convinced that conservation pays; he must be aided in adapting appropriate conservation measures to his system of farming and in

making the adjustments essential to his, as well as the soil's best interest.

We believe therefore to get conservation measures effectively applied, they must be considered not as something separate and apart, but rather as an integral and very important part of every farm operator's farm management and farm business planning. That is the focus to which Extension has directed its efforts when dealing with the individual farmer's particular problems. In addition, of course, we are continuing to direct a great amount of effort toward developing a better general understanding of the need for and importance of conservation as such, and ways in which both individual farmers and groups of farmers may do something about it.

I do not need to review with this committee the contribution cooperative extension work has made in bringing to farmers the results of research which has helped them become such a well-informed and highly productive part of our society. That is in contrast with the peasant attitudes and low productivity of other lands.

We could not do that kind of a job without being concerned with the many problems farmers have to face in order to save and improve their soils and put them to best use in meeting their production and farm living problems. But, since extension conservation work has been part of a total farm program we have not singled it out for quantitative measurement as a separate activity.

Terracing, crop rotations, diversified farming, soil testing, drainage and other practices were an important part of early extension work as they are of all conservation programs today. For example, in 1912 the Texas Agriculture and Mechanical College issued a bulletin on farm terracing. In 1916 Texas county agents helped farmers terrace 56,000 acres, an early beginning of extension help with this specific conservation measure. By 1933 that figure in Texas had grown to a total of 7 million acres. Similar examples could be cited from many other States.

Of course, these and similar efforts in other States were one-practice beginnings; but since that time the struggle for better methods to influence farmers to change their practices has been going on. They have expressed themselves in different ways; unit farm demonstrations in Texas, diversified farming demonstrations in the South, farm-management demonstration farms in the TVA area, pasture-livestock forage programs in Nebraska, green pastures in the Northeast, balanced farming in Missouri, Kansas, North Carolina and many other States, and other organized and intensively pursued extension efforts.

Regardless of the particular form, all of these and many more have been progressive efforts to get farmers to face up to the fact that conservation is a major problem which they have to attack simultaneously with many others.

But we have not relied entirely on those things which we in extension could do alone. Recognizing the place of other organized efforts, extension has taken a very aggressive part in helping farmers to form soil conservation districts. In so doing, we recognized the value of having organized farmer leadership in attacking this important complex of problems. This local leadership device is one which extension uses in practically all its program activities. In addition, extension appreciated that with such districts a mechanism was provided to obtain additional technical workers to help deal with conservation problems.

Extension workers have continued to work intimately with soil conservation district supervisors in practically all instances after district formulation. In many instances county agents serve as secretaries to district boards of supervisors and work closely with them in developing and carrying out the district program. County agents' reports indicate that last year they assisted district supervisors with the conservation educational program in 2,107 districts. Even closer and more intensive cooperation is justified and desirable.

In my own State of Ohio extension has endeavored to make several approaches to conservation education. In addition to incorporating the conservation element in all our work with farmers and with soil conservation districts, we have attempted to provide an overall measure of progress which a farmer could use, called in Ohio the Soil Productivity Balance. We have found this approach very effective in enabling farmers better to measure progress in maintaining a soil productivity balance, which includes conserving the soil and building up its productive capacity.

We have been encouraging farmers, when they take their farm inventory every year, to at the same time take an inventory of the state of their land. This kind of an inventory looks upon the soil as a bank account in which the farmer puts nutrients into the soil through the application of fertilizer, use of good rotations, use of soil conservation measures, and the like. In turn he takes out plant food nutrients through the crops he produces. This bank account can be depleted through erosion and improper cultural practices. He needs a depositor's insurance, therefore, in the form of all the applicable conservation measures which are practicable and feasible for him to employ. Good farming gives him that insurance.

Grasslands, in their proper place, are a major contributor to conservation. It has been estimated that if all the grasslands east of the 97th meridian in the United States were improved to the extent practicable with the information available today, and if an additional 70 million acres of abandoned idle and submarginal cropland in the South were converted to improved grass, we could carry 50 percent more animal units than we have today.

But merely converting land to grass or increasing the carrying capacity of existing grasslands do not in themselves solve the problem. There must be a balance between grassland and other acreage uses, between grasslands and the type of livestock a particular farmer insists upon producing, his farm buildings and feed storage capacity, his local markets, and many other factors. Hence, a perfectly good means of conserving the soil may not be feasible on a given farm. This emphasizes the complexity of the individual farmer's problems and the necessity for working out with him a conservation plan that complements his farm business plan. The plan may be a good plan for the soil, but if it doesn't fit the farmer's business needs, it is not likely to be carried out.

Last December we obtained from State extension agronomists a report on the intensified grassland improvement program the land-grant colleges and the Department of Agriculture are working on. They indicated that 37 million acres of grassland had been improved in the 36 States from which we received reports. The improved grasslands averaged carrying 1 animal unit per acre, while it took about 3 acres—or much more in some areas—of unimproved grassland

to carry an animal unit. They said about 130 million acres more could easily be improved. That may be low, but it is an immediate goal which we have the research results to attain, and which is attainable if we could put the concentrated educational effort into it.

We in cooperative extension work know that there is a big job ahead in soil and water conservation. We must not only maintain the American living standards and our security and role in the world, but essentially the cultivated and grassland we have now must provide for the likely 20 percent increase in our population by 1975.

Farmers have met every such challenge and more by greater efficiency, better varieties, more fertilization, mechanization, soil improvement, and better farm management. Recent research and analysis indicates that we could increase all farm production another 60 to 75 percent if on all farms we could put together the best combination of known practices. Those estimates based on research results and production capacity studies by the Department of Agriculture and our land-grant colleges are a tremendous challenge to those of us in cooperative extension education work.

Those challenges involve total production. We know conservation is tremendously important, but we are convinced it is a part of the total job. That job we feel is optimum sustained and profitable production, insuring high farm incomes and better living. It is a localized job dealing with individual farm families in vastly different situations and within their abilities and desires for improvement as we can influence them.

There are two basic determinations that should guide future conservation programs. One is the approach that should be used. That is a top-policy decision. The other, after the best and most practical approach is set, is the speed with which we want to make progress. That is a question of money for the practical and necessary research, service and educational work to do the job.

We all together have made real progress in inspiring and helping farmers increase efficiency and yields and in soil conservation. We not only have to maintain the progress that has been made, but are likely to find the remaining distance we must go more difficult both because of the harder-to-convince people and the more difficult land problems concerned. Our extension-teaching methods studies have shown that getting the last 25 or more percent of farmers to adopt a given practice is by far the hardest.

The challenge for more concentrated localized action is especially strong to the cooperative extension service because of its tie to county governments and the research and other forces of the land-grant colleges, as well as to the Department of Agriculture. Extension has widespread farmer and other working relationships in so many of the areas most vitally concerned with conservation. We are directing as much of our resources and energies as seem feasible to assisting with conservation problems. We are seriously studying all our relationships, staffing needs and methods in the hope of better playing our proper part.

Some of the more specific challenges we see are the need to:

1. Insure a sound economic base for the business of farming with special emphasis on the economic aspects of the conservation of resources on individual farms.

2. Hasten the application of research findings to farm practice; shorten the lag between the laboratory and the farm.

3. Bring to bear on every farm the most effective combination of practices which will increase the net income in a manner which is consistent with the objectives of resource conservation and desires of the farm family.

4. Bring adjustments in line with the current demand for food and fiber.

5. Strengthen the program of soil and water conservation on the farm by insuring an economically sound program which will appeal to more farm families.

6. Insure the application of the conservation plan on a sustaining basis.

To meet those very large educational needs we must have all possible research and technical help from our research and specialized agencies. With all of us working together to assist farm people the job can be done, and must be done.

Making a plan for the land is one thing. Fitting it properly into the farmer's total business, leading him to make changes in his thinking, and to make adjustments to put such a plan into effect on a permanent basis, is another job. Helping farmers make sound conservation a part of the total farm business operations is Extension's big challenge and interest in soil and water conservation.

The CHAIRMAN. We thank you very much, Dr. Ferguson, for your statement. You mention on page 6 the difficulty in getting the last 25 percent of the farmers to fall in line with any specific practice. Are you finding that any easier as the younger farmers come on?

Mr. FERGUSON. Definitely. I think, Mr. Hope, this is because the younger farmers have had more experience in 4–H Club work, have had more contacts, more of them are vocational agricultural students. I think very definitely that problem is not as difficult as it used to be when I started out in extension work.

The CHAIRMAN. I would judge that would be the case.

Mr. HOEVEN. Is it not true today that many of our younger farmers are graduates of agricultural colleges?

Mr. FERGUSON. A great many, Mr. Hoeven, yes. A great many of our young farmers today are graduates of either 4-year courses or short courses. So that problem—we used to talk about the last third that it was difficult to reach. Now we talk about the 25 percent, and as time goes on that will diminish rather rapidly.

Mr. HARVEY. Is it not also true, Mr. Ferguson, that through the years we have not only learned much more about proper extension methods, but also we have much better training for extension agents and that they are thereby able to do a much better job?

Mr. FERGUSON. Yes, that is very true. Of course when extension started out it was almost an entirely new field. There was not very much in the field of training—that is, educational training—for extension workers. But in recent years we have greatly stepped up the knowledge and know-how of how to train people to do educational work on an informal basis.

Our formal education preceded our informal education, and I think probably we lagged a little bit there for a few years but now we have a pretty good body of subject matter in the field of educational training for extension folks.

Mr. HARVEY. I do want to just say this. I think extension at the National, State and local levels through the years has come to fill a

very important niche in the life of the farmers of our country and the leaders of our Extension Service are to be complimented upon the very fine degree of confidence and support that they have so richly earned among the farmers.

Mr. HOEVEN. Mr. Ferguson, I certainly concur in everything that Mr. Harvey said, and particularly as it pertains to the State of Iowa.

I am very much interested in that part of your statement found on page 6 when you say:

> Recent research and analysis indicates that we could increase all farm production another 60 to 75 percent if on all farms we could put together the best combination of known practices.

I am one of those who has been suggesting for a long time that we should have a model soil-conservation farm in every county in the agricultural sections of this country. This would permit the farmers in any particular county to go out and see with their own eyes just what soil conservation does for the land. They listen to lectures and they are beneficial; but when they actually see something in practice, it might bring those in the 25 percent category into line with the other 75 percent who have already been convinced. What do you think about such a proposal?

Mr. FERGUSON. I think you have a real point there in educational technique, Mr. Hoeven. I presume all of us react to what we see. We react even more acutely to what we do. And certainly that kind of teaching, where you can take someone and show him the thing actually in operation, is many, many times as effective as a formal talk, let us say, or a piece of literature.

Of course some people react differently from others, but I think all of us, generally speaking, react very favorably to the opportunity of seeing something actually in operation. We get a little keener concept of it. I remember one farmer in Ohio who used to go on tours with me and who always carried a steel tape in his pocket. I was always interested in him because when we were on a farm and there was something he was interested in, he would always get this tape out and he would make a few measurements on a new gadget he had seen.

I think that is the type of thing that makes the thing you are talking about here, Mr. Hoeven, very, very important. People do respond quickly to what they see.

The CHAIRMAN. It is necessary for the Chair to leave to fulfill another engagement. I will ask Mr. Hoeven to take over at this time.

Mr. LOVRE. Mr. Ferguson, do you think we could strengthen the program of soil and water conservation more rapidly if it was possible to liberalize credits to farmers who are willing to engage in such practices? Is there a need for liberalization of credit for that purpose?

Mr. FERGUSON. It would be purely a matter of opinion on my part, Mr. Lovre. I do not know that we have any studies which would indicate that. I would like to see a study made. That question intrigues me. I do not think I have the answer to it, and I am not sure that any of us have the answer to it.

Maybe this is the place where our experiment station people could do a little investigation for us and find out just what are some of the things that limit the application of conservation practices. My guess would be that in some cases it may be credit; but I would not have any evidence on that point.

Mr. POAGE. Mr. Ferguson, of course we have heard a lot of talk for a number of years—we heard some this morning—about the friction that arises in some places between the Soil Conservation Service and the Extension Service; or between the Extension Service and the PMA; or between the PMA and the Farmers Home and various agencies.

I recognize that there has been some of that, although I think we tend to exaggerate it. Of course you have not been in your present position long enough maybe to give us a fair appraisal of it, but you have been in the extension work a long time. I just wonder whether you think that is getting better or worse?

Mr. FERGUSON. I think it is getting better, Mr. Poage. As a matter of fact, I think if you were to take a quantitative look at that situation, it is not too bad.

Mr. POAGE. I am inclined to think it is much better than many people have wanted us to believe.

Mr. FERGUSON. I think that is right. In my own State of Ohio—and maybe I should not speak here from the standpoint of my limited experience in one State—I could not imagine any agencies working any better together than did the Extension Service, the Soil Conservation Service, PMA and Farmers Home Administration. I think they work closer together sometimes than departments on the campus work. You cannot eliminate people; and being peculiar, as sometimes we are, we do have personality conflicts and that sort of thing.

But I think for the most part the differences have been overexaggerated, Mr. Poage.

Mr. POAGE. You pointed out, and I think correctly, that most of these differences have arisen as a result of a clash of personalities. I realize that that on its face might indicate the thing to do would be to separate these people and never let them come together. I wonder what you think about that?

Mr. FERGUSON. I think the other trend is much better. I think you had better get them closer together, because the closer together people are, the better they work together.

Mr. POAGE. I think so, too. We once had these agencies scattered all over my town about a mile and a half from each other. They have found that, since they have gotten together, nobody has any horns and they are all sort of good folks, and they are all working together mighty well. Frankly I have no personal complaint whatsoever.

I think all of these agencies have worked together wonderfully well. I think after they have gotten together where they meet each other every day and recognized that this fellow was just another man working for the same objectives, they have probably done even better than they did before.

I just wondered if that was your viewpoint, too.

Mr. FERGUSON. Very definitely. I feel very strongly that agencies living together and working together can do a tremendous amount of cooperative work. I think you have to work at it. That is, those things just do not happen spontaneously. Again, if you will pardon my reference to my own State, we set up operations which brought them together. That is, between the soil conservation people and the extension people at the State level, we had regular quarterly conferences and they were scheduled and kept.

I think those conferences did a great deal, Mr. Poage, to ward off

something that might be beginning to cause a little trouble out in a county, and we were very frank with each other. We sat down and talked those things over.

If we had some friction out in a county where it may have been because two folks were not too compatible, we sat down and tried to figure out what we could do to straighten it out. Usually those things cleared up with a little joint conference.

Sometimes you had to have it back of the woodshed, but usually they cleared up pretty well. I do not think we had over 1 or 2 cases where it was even necessary to move any personnel to get it done.

Mr. McIntire. You made reference here to county agents serving as secretaries to soil conservation districts.

If I had any observation, it would be that it gets them away a little bit from the fundamental job, and it seems to me in some counties, at least, we must constantly orient the objectives of the county agent and divorce him from the assignment of a management office in a unit which he has perhaps sponsored, but which he should divorce himself of as quickly as he could and get back into his car and out on the farms, rather than in the office being an officer of some of these various agencies.

I am sure you are in accord with that, too.

Mr. Ferguson. Mr. McIntire, you talk like an extension director. That is a problem, and we have it, I know, in education work. There is a little tendency when a person helps organize a district for instance, to feel a little responsibility for it, a little pride of parentage; and usually the tendency is for him to stay in there and work very closely with it.

Mr. McIntire. The more capable the man, the more the folks want him to stay.

Mr. Ferguson. That is very true.

Mr. Hoeven. We thank you, Mr. Ferguson. We are very happy to have made your acquaintance and no doubt we will see you often.

The committee will stand adjourned until 10 o'clock tomorrow morning.

(Whereupon, at 12:17 p. m., the committee adjourned until Thursday morning, 10 a. m., April 30, 1953.)

SOIL CONSERVATION AND WATERSHED PROGRAMS

THURSDAY, APRIL 30, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 a. m., in room 1310, House Office Building, Representative Clifford Hope (chairman) presiding.

Present: Representatives Hope (chairman), Andresen, Hill, Hoeven, Simpson, Dague, Lovre, Belcher, McIntire, Williams, King, Harrison, Wampler, Poage, Grant, Gathings, Abernethy, Albert, Polk, Thompson, and Jones.

The CHAIRMAN. The committee will come to order. We will first hear this morning from Mr. Webb Embrey, of St. Joseph, Mo., representing the St. Joseph Chamber of Commerce. Will you come forward, Mr. Embrey.

STATEMENT OF WEBB EMBREY, ST. JOSEPH CHAMBER OF COMMERCE, ST. JOSEPH, MO.

Mr. EMBREY. Mr. Chairman and members of the committee, I am Webb Embrey, agricultural agent, St. Joseph Chamber of Commerce. I represent the agricultural policy committee of that body before you today.

We have a very particular interest in this problem affecting agriculture. We have had an active program for 10 years, because we recognize that the welfare and prosperity of our city depends on the productivity of the agriculture and the trade territory. This program is of about 10 years' duration. It is supported entirely by private funds contributed entirely by our businessmen because they consider it a business investment in the future of our town.

We have a very realistic and selfish interest in this matter of conservation and the improvement of our soils because we recognize the soil as the greatest natural resource in our territory. It is also the foundation of all of our various forms of agriculture.

We are located in northwest Missouri immediately adjacent to Kansas, Nebraska, and Iowa; and we have had an opportunity to carefully observe the soil-conservation practices and programs carried on in that four-State area. As a result of these observations over a 10-year period and a rather close study as to the results obtained by the various programs, we have reached some rather specific conclusions.

The paper that I have has some background material that I am going to quote from, from time to time. There are two rather general approaches being made in the area to the conservation problem. They are outlined in detail in there, and I want to quote from it as I

go along. Very briefly, one is the Federal agency approach being carried out by the Soil Conservation Service; and the educational approach, or balanced-farming approach, carried out by the Missouri group.

Both programs have done some excellent work, and they are making progress in calling this conservation problem to the attention of the people in our area. However, we think we can see some differences in the results that are being obtained; and, even more important, we think we see some differences in the acceptance of that program among the people and we think there will be more important differences as the program progresses.

The CHAIRMAN. You are comparing the balanced-farming program in Missouri and the soil-conservation program? Is that what you are comparing?

Mr. EMBREY. That is right. By far the most comprehensive and widespread approach is being made by the Soil Conservation Service, United States Department of Agriculture. This agency, under the leadership of Dr. Hugh Bennett has done a tremendous job of selling conservation and making our people conservation conscious. The Soil Conservation Service developed from early United States Department of Agriculture work in erosion control through the CCC camps, during the drought and depression years. It developed the soils-district enabling laws and pushed this legislation through the many State legislative bodies.

Without a doubt Soil Conservation Service personnel suppied the initiative, the leadership, and the organizational drive in developing the Friends of the Land and the Soil Conservation Supervisors' Association, which have done and are doing much to further the interests of a nationwide soils-conservation program.

The Soil Conservation Service continues to supply the funds and personnel for technical assistance, which is the lifeblood of the soils districts programs. In addition, the Soil Conservation Service carries much of the responsibility for research and educational work in a large number of States, because of the limited funds and work done by the land-grant colleges of those States.

In spite of the tremendous promotional work of the Soil Conservation Service, this agency has several limitations in getting the job done on the land. First, it is a nation-wide, Federal agency and suffers from the inflexibilities of all great bureaucracies. Policymaking at the national level sometimes fails to appreciate the local variations and differences in soils, topography, and people. Methods, techniques, and recommendations are determined by someone so far removed from local conditions and people that the recommendations are often faulty and the program unacceptable to the people involved. This criticism is not peculiar to the Soil Concervation Service, but applies to most straight-line authority, Federal, or so-called "action agencies" of Government. If I were to take the time to discuss the program of the Corps of Engineers, I could really give you some information along that line. The tremendous drive toward promotion, self-perpetuation, appropriations, and due credit preclude any material changes from these characteristics.

A second limitation of a Federal agency is that it must necessarily reflect the political philosophy of the party currently in power, in order to be assured of appropriations to continue operations. This

makes it necessary for top administrative officers to spend much time in the field of politics and public relations, and takes them away from the actual job at hand. Aside from the actual time lost, this diversion of interests is often reflected in policy decisions.

As an illustration, the Soil Conservation Service program was developed during the period when the predominate governmental influence was toward direct aid to agriculture. Early erosion control and conservation efforts were designed as subsidy programs to bolster the agricultural income, during a time of economic depression. A great deal of the early publicity and educational effort was designed to convince the public that all people had a financial responsibility for conservation, in order to justify the use of public funds. With the change from depression to World War II, the subsidy philosophy was continued and justified on the basis of a rapidly expanding food production to "win the war and write the peace."

After the World War, the philosophy turned toward postwar reconstruction with the emphasis still on public spending for conservation, in the interests of national welfare.

The CHAIRMAN. Mr. Embrey, will you suspend just a moment. Some of the members have come in since you began. I just want to say to the members who have come in that the witness is Mr. Webb Embrey, of St. Joseph, the agricultural representative of the St. Joseph Chamber of Commerce.

Mr. EMBREY. Unfortunately, or fortunately—depending on the viewpoint—a great many farmers have become convinced that the responsibility is a national one and that the job can only be done with Federal aid and assistance.

Mr. POAGE. Do you think that there is a national responsibility in that connection or not?

Mr. EMBREY. I think there is not. I will get to that in a minute. I could elaborate, but I think I will do it later, if you will allow me, Mr. Poage.

The Soil Conservation Service continues to emphasize the problem as a national responsibility of all the people. They have consistently worked for increased appropriations in order to provide free technical service for farmers doing conservation work. They have, in many cases, adapted recommendations and specifications to fit the abilities of farmers using their own equipment in order to perpetuate the illusion of low costs to the individual. Incidentally, this is a direct reversal of the policy of the old CCC days, demonstrational work, when the Government paid most of the costs.

They have actively and persistently organized local soil districts for the purpose of receiving Federal aid and assistance. One of the most popular arguments in organizing the local district was that it would enable farmers to receive Federal aid and assistance without cost to themselves. Of course this is a bureaucratic fallacy, but it tends to perpetuate the philosophy that farmers must rely on Government aid and assistance in order to do conservation work.

A third characteristic and weakness of the Federal agency approach—and in the eyes of the American farmer it probably is an objection rather than a limitation—is the tendency to depend on regulations and laws or compulsion as a tool to get the job done if other methods prove ineffective. This tool has been kept well in the background; it has not been used in our area to my knowledge. Many

people say the intent is not to use it. But there is no question but what the State soil districts enabling acts carry the compulsory provisions. This idea is being advanced from time to time that compulsion may be necessary for protection of the common good.

This philosophy is being developed carefully and slowly so that responsibility for enforcement may be thrust upon local people who are district supervisors or commissioners, but the philosophy is definitely there. And surprisingly, many people are accepting the idea today under guise of down-stream flood control, stewardship of land rather than outright ownership, in the interest of national welfare.

Mr. THOMPSON. May I interrupt just a moment, please, Mr. Chairman. You left out a word.

Mr. EMBREY. I am leaving out quite a few.

Mr. THOMPSON. You left out the word "socialistic," and I merely wanted to be sure we did not tie downstream flood control to socialism in your testimony.

Mr. EMBREY. Thank you, sir.

Mr. THOMPSON. Stewardship of the land is also socialistic?

Mr. EMBREY. I am trying to shorten this thing and not read it. I do not read too well, gentlemen.

Mr. THOMPSON. That is a rather definite term that you are applying, and I think the record should show it.

Mr. ANDRESEN. Will the gentleman yield? Of course it would be socialistic if the Government would direct the operations and the methods used on every farm. If a man does not follow up certain practices, then he does not receive the compensation from the Federal Government for what he might have otherwise done.

I suppose you are referring to that in the event we get to a point where the Government is to run every farm and tell the farmer what he must do, then you feel that that would be socialistic. I agree with you.

Mr. EMBREY. Yes, sir. There is one other point involved, and that is now under present enabling legislation, after due process—I can tell you approximately if you want to take the time—but after due process certain land-use regulations can be voted within a soils district. If they carry by the required majority, then those regulations become in effect law. The operators, the farmers, are required to follow them.

Mr. POAGE. You mean that is true in Missouri under your Missouri law?

Mr. EMBREY. That is not true in Missouri; that is true in Kansas, Nebraska, and Iowa.

Mr. POAGE. It is not true under any Federal law, is it?

Mr. EMBREY. No, that is a State enabling act.

Mr. POAGE. It would hinge upon your State law.

Mr. EMBREY. Yes, sir. A recent study conducted at Iowa State by the economic and sociology departments points out some of the weaknesses of the Federal program approach. It is Research Bulletin 391, entitled, "Some Obstacles to Soil-Erosion Control in Western Iowa." I am sorry that I could not get copies for the committee; they are out of print at the present time. I believe that you can get them later by writing to Iowa State College.

It was designed to find out why farmers are not carrying out recommendations of technicians toward erosion control practices. To my

knowledge it is one of the first comprehensive attempts by a responsible organization to find that information.

I would like to quote you two paragraphs from there which I think reflect some of the philosophy of which we have been talking. The first one:

> Public interest in private land no longer permits individuals to exploit their land without regard for public welfare.

That is a statement, gentlemen, we are seeing quite often today. And to answer Mr. Poage, we would not deny that, if the public welfare demanded that we take collective action to protect it, we do not think today that that is necessary and we do not think that that is the most desirable way of getting voluntary cooperation on soil conservation from private owners.

The second quotation:

> On the other hand, the second difference—

and that was one of two that I lifted out of the paragraph—

> that between farmer objectives and those of public programs—appear to be a difficult one to bridge. After public programs progressively reach this point, their efficiency might be seriously impaired because obstacles loom so great that farm operators are not willing to strive for more erosion control. In such a situation, public assistance in overcoming the obstacles would seem to be essential.

Just below are four quotations that I took from the bulletin which listed the reasons farmers gave the survey people for not following the recommendations. No. 1: High forage rotations in the erosion-control plans introduced many obstacles; 103 of 144 operators—80 percent—in the study disapproved of these rotations.

No. 2. Successful control of runoff water by terracing was also questioned because of washouts or overflow might take place in heavy rains. That again is a tieback to our statement about unadapted practices, about the practices being recommended by somebody unfamiliar with the situation. Their terraces do break over in southwestern Iowa, and it is a faulty specification.

No. 3. One of the major objections to grass waterways was that seedings for these waterways frequently wash out.

No. 4. Some operators did not believe that the increased income from conservation practices would cover all of the outlays involved.

Those statements—and there are many more in the bulletins like them—are the reasons farmers said they were not adopting soil conservation practices as recommended to them in the plans. Several things are apparent about it. The first one is that the farm plans were worked out by agency personnel for farm people and not with farm people. That is a great difference. When you are working out a plan with the farmer, you do not come out with a rotation that 80 percent of them disapprove of.

Second, the plans were designed to conserve the land, with little thought given to the type of operation or the wishes of the people. There is another important difference in our thinking. Soil conservation alone is not our goal, gentlemen. We are interested in a productive and prosperous agriculture. In that we wish to conserve the soil, yes, but we wish to use it. And you must include other things such as rotation of crops, livestock, all phases of the farm operation if you are going to have a prosperous agriculture.

The third one we have already covered is that the recommendations and specifications on erosion control work were either unadapted or inadequate, because good terraces do not break over in heavy rains, and properly designed and constructed grass waterways do not wash out. We have hundreds of them in our area in Missouri that have been there for 8 to 10 years and are still functioning. Some members of this committee, I believe, have been there and have seen them.

Fourth, of course, is the subject of public welfare philosophy, which is evident from the prevailing opinion that soil conservation practices could not be economically justified. Since this survey was conducted in counties where the Federal program had been in effect from 5 to 9 years—none less than 5 years—farm families should have been reasonably well acquainted with it. Only 14 percent of the families in that area surveyed had attempted to cooperate in any way or had signed up farm plans.

Only 11 percent of these, or about 1.5 percent of the total farm families living within the area surveyed, were carrying out an effective program as planned—and by that they meant they had reduced erosion to 5 tons per acre annual loss, which was the criterion that the Soil Conservation Service set up as an acceptable job of soil conservation for the basis of the survey.

We think that indicates a rather limited acceptance of the program; and under this Federal philosophy approach, the only logical answer would appear to be either one of greater subsidies or compulsion, or some combination of the two to get a more effective job done.

If we examine the proposed programs and appropriation requests of the Federal agencies and their supporters, we must conclude that they, too, have so decided. The Young plan being presented as a flood-control plan to the Department of Agriculture, the requests for increased appropriations; and the recent attempt to take over PMA payments, we think, are evidences of this type of thinking.

A second approach that is being made in our territory is on a somewhat different philosophy. It has been rather limited because of the funds and leadership. Only a few States have given serious consideration to this approach with Missouri, under leadership of the Missouri College of Agriculture, being probably the outstanding example. The approach is through educational methods alone, with the principal responsibility left with the landowner and operator.

Dean Miller was one of the early pioneers of conservation work. He was doing it before the Federal programs came out. He was a consultant when the first station was set up at Bethany, one of the first in the country, and worked with them, and has through the years. Deans Trobridge and Longwell continued their interest in conservation and had all the members of the college working on conservation problems. Dr. Albrecht, one of the outstanding soils men in the country, developed a complete soil test and a system of complete soil analysis and fertility replacement. Professor Wooley and Marion Clark developed certain engineering tables and specifications that fit Missouri conditions, not conditions all over the United States.

Gentlemen, the result of this thing was the Missouri balanced farm plan. The things I have just said are more than an attempt to give due credit. It is a statement of fact that conservation work other than that done by the Federal agencies has been and is being done. It is being done under local leadership of the land-grant colleges

and with State funds, assisted by grants-in-aid Federal funds. The quality and scope of the work done in Missouri through the balanced farm approach will equal or exceed that of any of the Federal agencies in our area to date.

I would like to call your attention to a table on page 6 which was taken from the annual reports of 1951 of the PMA, Extension Service, and the SCS annual reports. Of 22 counties in northwest Missouri, 15 have balanced farm associations; 9 have soil districts; 2 of them have both. That is the reason why it does not total 24.

In the left-hand column in the 15 balanced farm counties, the first column is the PMA reports of the amount of limestone, for instance, in No. 1 that they reported they had made a payment on. The second column is a total of the tons of limestone as reported by the Extension agents in that county used for the year. And in the SCS counties, the third column again, the PMA reports—and those are all county average figures. For some reason we were unable to get the lime report made by the SCS technicians by counties.

You will notice the 10 items and you will notice the figures. I think that two things are significant. The first one is that the balanced farm counties far excel the district counties in the permanent practices which require heavy cash investment; and the second one was that the work done above that amount subsidized by PMA was much greater in the balanced farming counties. We think both points clearly reflect some differences in the thinking of farm people as a result of the differences in approach to the problem.

Mr. POAGE. What about these counties as to the fertility of the soil? I do not know your country well enough; but I do know, of course, that in a county where you have fertile soil and prosperous people you will find them spending more on these practices, just like you would find them spending more money on any practice.

Mr. EMBREY. They are reasonably comparable. I would have to have a map to show you. They are not blocked out. We have got northwest Missouri, 22 counties solid; and over here will be a Soil Conservation Service county and this will be a balanced farming county. They just jump around. I would say that they are comparable. We think that they are.

Mr. POAGE. You mean that part of northwest Missouri is in soil conservation districts and part of northwest Missouri is not in any soil conservation district. Is that what you mean?

Mr. EMBREY. That is right. I am only comparing the 22 counties in northwest Missouri. We think they are very comparable.

Mr. POAGE. These are all in northwest Missouri? None of these are in southwest?

Mr. EMBREY. No, that is right. They are all northwest Missouri counties.

Mr. MCINTIRE. Mr. Chairman, could I ask a question there for clarification. In these 15 counties of balanced farming associations, there is no overlapping in those counties with soil conservation districts?

Mr. EMBREY. Two counties have both; yes. Balanced farming is more than just soil conservation; it is a complete system of farm management, family living, in which conservation is a part. Actually it is a system developed by the farm family to provide maximum returns with available labor resources and equipment.

It not only conserves the soil but it builds the soil and will increase fertility to give greater and more efficient production, both now and for the future. It is a program which will stand on its own feet and pay its own way without benefit of the subsidy. It can and is being sold as a sound investment to the families participating; and the returns to date in every case where we have a record where the plan has been put into effect and is functioning show that it is a sound investment.

It is rather difficult to make comparisons in those two programs. One is a great nationwide program carried out by a Federal agency, with the support and funds of the United States Government. In addition it has had very wide support by private agencies, organizations who have contributed funds, publicity and leadership. The other is a local program, limited to Missouri and a few other States; and it has not had too much of that type of funds. One is a Federal agency, a national-program approach, with the principal responsibility that of all the people, or Government. That is the philosophy we get from the things that they say and do.

The methods would include a feeling of responsibility to conserve the soil for the common good. The incentive would be a subsidy to share the costs and, we are afraid, compulsion through laws and regulations to be used if the incentive proves ineffective or inadequate. The other is an education, private-enterprise approach, with the principal responsibility that of the landowner and operator. The methods would also be educational, but toward recognition of the fact that soil conservation, good management, are sound financial practices for the operator.

The incentives would be increased production, increased profits, higher standards of living. Our farm people understand those incentives. We think they are the incentives that have kept our country a great country.

We think, gentlemen, that if we can convince farm people that conservation is good business for them—and we have hundreds of records and experiments to indicate that it is just that—once farm people believe that, you do not have to pay them to do the job. You do not have to make them do the job. You cannot keep them from doing the job.

All we have to do is just get out of the way once they understand that and it will come as did hybrid corn, tractors and many other technological advances in this country.

The soils district program presents a rather strange analogy in the conservation picture. The districts were organized by a "from the top down" Federal agency to provide a "from the bottom up" or "grass roots" approach. The status of the districts varies a great deal from county to county and State to State. We do not know into which classification they may ultimately fit. Without a doubt the districts were promoted and organized by SCS personnel to provide local sponsorship of the Federal program. The principal function of the districts to date has been to provide a local organization to receive Federal aid and through which Federal personnel could work.

However, the districts' supervisors or commissioners—the farmer members out there—have proven to be an excellent medium for educational work. They have done outstanding work at the local level to sell conservation practices to their communities and neighbors.

This local work is good. It is an excellent promotion. The principle of farm people educating themselves to accept responsibility for conservation work is certainly sound, and it is strictly in accord with our views and we think American free-enterprise traditions.

However—and this is important—the education to date has been toward acceptance of the Federal agency or national conservation program; and that philosophy, as we understand it, is the subsidy or public-welfare approach. The relationship between the district movement and the Service has been very close, and that is perfectly logical in that SCS organized the districts; SCS personnel have been their principal source of contact and help—in many States their only help—and the cooperation is mutual because the district supervisors and their supporters have been the principal source of help to SCS in getting increased appropriations from Congress.

Because of this alliance it has been very difficult for people to make any distinction between the Federal agency and the districts. We think that is unfortunate because they are two different things. The district supervisors or commissioners—those farmers who run the districts—are generally sincere farm people. They are leaders in their respective communities. They have a real interest in conserving the land and they spend many hours working for the benefit of that program. They think of it as a local program, their own program, and they are fundamental believers in the American way, or free-enterprise system.

But their only leadership to date has come from the Federal agency, and they have been inclined to accept the Federal agency's philosophy of the public-responsibility approach. Many of them honestly believe that responsibility for conservation rests with all people, or the Government. Others feel that agriculture alone cannot afford to pay the cost of the conservation. A great many have failed to carefully analyze the implications, or to think what the end product of such a policy may be.

We think when the facts do become evident, when these men think that thing through, many of them will choose the educational, or American, way.

The Soil Conservation Service, on the other hand, is a Federal agency and it is committed to the national problem, the public welfare approach. In fact their very existence depends on the philosophy that such a program is necessary. While they do some educational work, their justification in the national picture is as an action agency to carry out a great problem of public assistance. Subsidies and compulsion are tools to secure cooperation with such a program, and SCS will use them if necessary to get the job done.

Their apparent philosophy is that the end justifies the means, and that the public welfare outweighs any infringements on individual rights. Since SCS would have difficulty in justifying its existence under any other philosophy, we do not expect any change from that.

The soils districts program could contribute much to the individual educational approach to conservation. It has the local leadership and interest necessary to all great educational programs. However, as long as its leaders continue to follow and support the Federal agency approach, the districts' program must be considered as in accord with that philosophy and therefore subject to the weaknesses we have just outlined.

A change in thinking, or somewhat different leadership, could make the districts' program one of the most constructive forces in the field of conservation.

Clearly, then, we think an examination of the Soil Conservation Service program is in order. If we are to avoid confusion, conflicts and eventual failure, we must choose one road and rededicate our energies toward the common goal. If the goal is conservation of the soil in the interests of national welfare to protect the common good, then we might well take one program. But if it is conservation along with the preservation of individual freedoms and initiative, we certainly will take another.

The Federal program has had a 15-year trial. They have done some excellent work and have many accomplishments. However, some of the limitations that we have outlined above have appeared in our era, and we do not think the program is making the progress that we might logically expect. Even more important, the end products of this program may be inconsistent with our philosophy of government.

The educational approach has been tried on a more limited scale. It, too, has limitations in that it is not so well adapted to nationwide action programs. It may be slower in the initial stages and it certainly would require additional educational effort.

However, it is sound in principle and strictly in accord with our great traditions and developments in this free country where it has been tried in our era. The results have been equally great or greater—we think greater—and we think it has a much brighter future because our people understand that they are doing it for their benefit, not for the next generation, not for somebody else, not for the country—they are doing it to make money.

Gentlemen, with that background, which pretty well outlines our reasons for the specific recommendations we would like to make, we have four recommendations for your consideration, and they are on page 4 of that little bulletin.

No. 1: We recommend the allocation of all Federal funds for soil conservation research activities as grants-in-aid, earmarked funds, through the land-grant colleges of the respective States. We feel that many years of experience by those institutions have proven beyond a doubt that they are the best qualified to carry out a comprehensive research program that will meet the needs of their people. The research work in the past has been done efficiently; it has been done economically; and, even more important, it has been of a practical nature, acceptable to the people for whom it was designed.

No. 2: We recommend the transfer of all county and State personnel of the Soil Conservation Service to the extension services of land-grant colleges, with funds for their salaries authorized as grant-in-aid, earmarked funds for those institutions. We regret that this recommendation will appear as a setback by some to an agency who has done some good work.

However, soil conservation alone is not the goal to which we are striving. Soil conservation must be integrated into a sound system of management, including crop, livestock, and all other phases of farm operations and family living, if we are to have a continued and prosperous agriculture.

It is only reasonable that if we are to avoid confusion, duplication in effort, duplication of cost, all educational work of farm people must

be tied to the research of the land-grant colleges and coordinated through the Extension Service. That is, unless you are willing to set up an entirely new and separate Extension Service to duplicate those services.

This has been tried and proven. It is a successful method in our country now for many years.

No. 3. We recommend that you retain the U. S. Soil Conservation Service staff, or parts thereof, at the Washington level as coordinating unit of the Department of Agriculture, at the same level and on the same basis as the United States Extension Service. This recommendation may appear inconsistent to you with the two above, but our thinking is this. We cannot afford now to eliminate the experience and leadership of the past 15 years until the land-grant colleges will and can develop a program that meets the needs of the people in their States.

Very frankly, many of them have been very negligent in that respect. They have simply sat by and let the Federal program carry the load over these years. They will need help and they will need guidance to develop adequate conservation programs, but it can be done that way; it has been done that way in Missouri. We think the advantages are those pointed out in the previous testimony.

No. 4: We recommend that the PMA program be reorganized so that the agricultural conservation program payments serve as incentives for educational and demonstrational purposes, rather than as subsidy payments in the interest of public welfare. Frankly we do not know exactly how to do that job, but we think certain basic principles must be recognized.

First, the practices should be approved as a part of an overall plan of farm improvements. They should meet the minimum specifications of the land-grant colleges of the State in which they are used. The administration should be in the hands of local, State, and county committees, with funds assigned on a grant-in-aid basis to the respective States and counties.

We feel that the above recommendations would eliminate none of the help now available to farm people on conservation work, and that is important. We think they would bring about substantial economies in the overall conservation program. They would eliminate much of the confusion and duplication that now exists in our area and in many other areas of our State. They would put conservation on a sound basis in the American tradition, and would utilize the tremendous initiative and resourcefulness of our people toward a common goal.

We think they would eliminate some of the present emphasis on subsidies and compulsion.

Gentlemen, that concludes my statement. Thank you. I will be glad to answer any questions.

The CHAIRMAN. We thank you very much, Mr. Embrey. Are there any questions?

Mr. THOMPSON. Are you in a soil conservation district in your area?

Mr. EMBREY. We have both adjoining our town, St. Joseph, Mo., which is in Buchanan County. It does not have a district. De Kalb County is on one side, and Clinton County is on the other, and they do have districts.

Mr. THOMPSON. You have seen it work both ways?

Mr. EMBREY. We have seen it work in four States. We have seen it work both ways.

The CHAIRMAN. Any further questions? If not, we thank you very much, Mr. Embrey.

We will next hear from Mr. Waters Davis, representing the National Association of Soil Conservation Districts.

STATEMENT OF WATERS DAVIS, NATIONAL ASSOCIATION OF SOIL CONSERVATION DISTRICTS

Mr. DAVIS. Mr. Chairman, my name is Waters S. Davis, Jr., from League City, Tex. I have been intimately associated with the soil conservation district movement since my own district was organized in 1944. I have served 2½ years as president of the Texas Association of Soil Conservation Districts, and I am now starting my fourth term as president of the national association.

I believe I can speak with the viewpoint of soil-conservation district supervisors from one end of America to the other. I did not come here this morning to necessarily disagree with the folks from Missouri. In that connection, though, I would like to give the members of this committee a little booklet that was not inspired, not written, not published, and not paid for by any Federal agency. It is called The Why, What and How of Soil Conservation Districts, and it is my own brainchild and that of our association.

That gives the philosophy of the soil conservation districts in the country; and, as you can see on the back page, we customarily sell them at $4.25 per 100. This is the eighth edition of 50,000 copies.

Before coming to this meeting I read Mr. Hope's opening remarks in which it seemed that this committee was most interested in delving into why the conservation program has not gone faster over the recent years. In that connection I thought a great deal about it, why the program has not been going faster. That has been of considerable concern to our association and I believe—though these 8 reasons are not all-inclusive—I can give you 8 reasons why the program has not gone even faster.

In the first place, as you gentlemen and the members of both the House and Senate Agriculture and Appropriations Committees know, soil-conservation districts have suffered from lack of manpower for technical assistance.

Two weeks ago I was in the State of Idaho where they have 1 technician to serve 2 soil-conservation districts. This technical manpower shortage is a very serious problem in getting this work on the land. One other shortage, which is still part of item one, is that the soil-conservation districts are still short of the correct technical answers. In other words, our research program does not have the answers to many of the problems that we are facing.

For example, in the dryer parts of the country—northwest Texas and the Great Plains, the wheat areas—so far there is no soil-building legume that can be successfully used.

My second item as to why the program has not been going faster—it may surprise you gentlemen to hear me say it—but in many parts of the country the high price of wheat has actually caused grassland that should be left in grassland, to be plowed out and put to wheat. In the cotton-producing sections of the country the high price of cotton

has discouraged farmers from using the proper locations. I do not believe that discouragement is wise. I am sure that it is not going to be profitable to them in the long run; but they felt that they could not afford to use legumes and sacrifice 40-cent cotton.

From what I read in the papers lately, that situation has taken care of itself.

My fourth item—and it was brought out by the witness who just testified—one of the reasons for the slowness of the program has been the struggles among agencies for control. It is our observation that among those soil conservation districts where the agency folks are working closely together, each of them doing his assigned part, the work on the land is going much faster and much better.

My fifth item is that we still do not have a strong enough educational program on the benefits of conservation, not only for posterity but for the immediate bankroll of the farmers and ranchers. That conservation educational program should be going ahead much faster, both to the city folks and to the people on the farms.

A sixth item might be that we are needing a medium-term credit arrangement for major farm overhaul jobs such as turning worn-out cotton land into livestock, either beef or cattle; and in that connection I would like to suggest that where a man has to borrow money to change over his farming methods, what he actually needs is a loan program so that he will not have to start repaying on the principal until he begins to reap the benefits of his conservation program.

In other words, give him a moratorium on principal of 2 or 3 years, more or less. We do have bank loans; we do have farm purchase loans, running up to 33 years, I believe. But there is a gap on these medium-term loans for conservation programs.

On number seven, when the soil-conservation district program first started, and for a number of years, we insisted that farmers sign up for a complete basic plan. In other words, we asked them to go a little bit further than they were ready to do at that time. That scared a bunch of farmers initially, but the last year and a half we have approached it on a gradual basis through an initial agreement, and then up to an advance, and then into the basic.

I am happy to tell you gentlemen that we are making great strides and much faster progress on that gradual approach.

Number eight, and the last of my items: Though it is quite true that the vast majority of the supervisors, commissioners and directors of the soil-conservation districts of America are taking their law-given leadership—and that law-given leadership, I would like to emphasize, comes from State enabling acts and the people in their own districts, not from any Federal law, as you gentlemen so well know—we in the national association are doing everything in our power to encourage every soil-conservation district supervisor to more aggressively assume this law-given leadership.

We believe that as long as the land of America is owned by the people of America, only the people of America themselves can solve that problem. And these soil-conservation districts are creations of the people themselves, and we believe that with added strength in these districts the job will get done. It will get done without Federal domination and it will get done without State domination. It will get done by the people themselves.

If any of you gentlemen have any questions to ask, I will be happy to answer them.

Mr. THOMPSON. Mr. Chairman, I would like to ask a question. I might say by way of enlightenment to the committee, Mr. Davis is a neighbor and constituent of mine and was the first one to start educating me along the lines of soil conservation. The education that you gave me, Mr. Davis, was very successful. You spoke of having a broad educational program in mind. Of course, as you know, I have been trying to do some of that myself. Can you elaborate a little bit on just how to go about it?

Mr. DAVIS. Mr. Thompson, acutally there is more than an educational program involved. The educational program creates the desire to do the work, but the desire alone is not enough. The farmer not only needs the desire, which is created by the educational program, but because land is individual—almost every acre is an individual just like human beings are, and just like human beings need technical assistance, medical assistance, to diagnose their ills, it is the Soil Conservation Service that diagnoses the ills of the land.

In that connection I hope none of you ever think that the Soil Conservation Service just goes out on a man's land and says, "We ought to do this because that is what the land needs," because they do not. They go out on the land with the man, and they plan not only what the land itself needs, but they plan it in accordance with the farm program of the farmer himself.

These farm plans are joint enterprises, with the technical assistance of the Soil Conservation Service and the farmer or the rancher himself and the soil-conservation district. In fact, the plan is agreed to by the district and the farmer himself—not the Soil Conservation Service.

Mr. HILL (temporarily presiding). Any other questions?

Mr. POAGE. Mr. Davis, I do not want to impose upon you because of my inadvertent absence a moment ago when I was called out to the telephone. The witness who just preceded you, however, left some impressions that to me were quite erroneous. I just wondered if you as one who is familiar with the activities of the Soil Conservation Service districts have the same idea?

He intimated—in fact, I think he said—that the Soil Conservation Service districts were controlled out of Washington. You have never worked with the Federal Government, I do not believe?

Mr. DAVIS. For the Federal Government?

Mr. POAGE. Yes.

Mr. DAVIS. No, sir; I am a simon-pure amateur.

Mr. POAGE. You are not on any Federal payroll now?

Mr. DAVIS. No, sir.

Mr. POAGE. Never have been?

Mr. DAVIS. No, sir.

Mr. POAGE. You do own some substantial real-estate holdings in several different parts of the Southwest, do you not?

Mr. DAVIS. I am a cooperator with five different soil-conservation districts.

Mr. POAGE. You are cooperating wherever you have farming operations?

Mr. DAVIS. That is right.

Mr. POAGE. You have done that because you have thought that it was to your advantage, have you not?

Mr. DAVIS. It has proven to my advantage.

Mr. POAGE. You did not do it entirely unselfishly or because anybody persuaded you that it was simply some good socialistic idea, did you?

Mr. DAVIS. No, sir.

Mr. POAGE. I believe the witness who preceded you intimated that this program was pretty rank socialism, this matter of cooperating with these districts. You did not go into it as a Socialist, did you?

Mr. DAVIS. No; I certainly did not.

Mr. POAGE. You have not found it to be socialistic, have you?

Mr. DAVIS. Not in the slightest.

Mr. POAGE. You have felt that it was good business for you as a substantial farmer and livestock producer to be in the soil-conservation districts, have you?

Mr. DAVIS. I have increased my beef production per 100 cows at my home place at League City from 15,000 pounds of beef per 100 cows—which is a 50-percent calf crop of 300-pound calves—to better than a 90-percent calf crop of 500-pound calves, making 45,000 pounds of beef, as against 15,000 pounds.

Could I make an observation? I have heard soil-conservation districts argued pro and con all up and down the United States; and the only places I have ever heard any anti-soil-conservation-district criticisms are in those parts of the country not yet in soil-conservation districts. In other words, ask the man who owns one. When you get in them and when you get to working with them, you do not worry about this socialism because there is no such thing as socialism in this.

Mr. POAGE. Now I want to go a little further about this planning. I understood the witness who preceded you to suggest that the soil-conservation districts forced upon a great many farmers plans that they did not want. I am a member of a soil-conservation district. In fact, I am a cooperator in two soil-conservation districts in Texas.

In the case of the planning in each of those cases, although I am not home very much of the time, in each of those cases before anything was done in the way of planning they took me on to the farm. They would not sit in my office and plan it. I have an office in the city of Waco. I am one of these town farmers. But they would not sit in my office and do that planning. They said, "No, we have got to go out and look at this and you have got to go with us to look at it."

Mr. DAVIS. They walked my legs off, too.

Mr. POAGE. I had to go on the farm and had to look at the suggestions they made—and some of them I did not like—and we worked it out so that before I signed anything I was in agreement with it. I thought that it would be helpful, and I still think that it is working out successfully. Is that or is that not the common ordinary practice of soil-conservation districts, to require that the landowner and the operator be consulted and advise with the technicians upon working out the plan?

Mr. DAVIS. That is exactly right. They did that with me in five different instances. And another thing about this plan: Some of these plans that I developed eight or more years ago, we have changed things since then and they are flexible. We changed things to meet changing conditions. In everyone of my own instances, which covers

five different operations, I worked out the plan with the technical assistants—it wound up being my plan, but they helped me make the land more productive.

Mr. POAGE. You are familiar with soil-conservation districts all over this country. Do you know of any area in this country in which it is the practice for the soil-conservation districts to prepare plans without consultation with the landowner or the operator and to impose those plans upon the land?

Mr. DAVIS. Why, of course not. That is not the program.

Mr. POAGE. That is the program as I understood it from the preceding witness.

Mr. JONES. I do not think this map is quite up to date. At least the two counties in the "Bootheel" where the Representative of the 10th District lives do have soil-conservation districts, and I think there are three other counties in that district that have them. I think that soil conservation is on the increase in Missouri.

Unfortunately we have had some opposition there which has been very active. But I want to say that this representative has worked with those people and we have carried on a fine work down there.

Mr. DAVIS. This map is as of last July.

Mr. POAGE. Going a little further than what we have done and looking to the future of soil conservation, do you feel that there is a need for possibly developing some change in our techniques of handling upstream floods and in changing the emphasis from the control of those floods after they have originated to the prevention of those floods?

Mr. DAVIS. Very definitely. I think we have been handicapped in recent years by lack of flexibility in our laws on this flood-control work. I think bills such as the one you introduced and that which Mr. Hope introduced will go far to bring about this flood prevention versus flood control.

Do not misunderstand me. Work on the land is not going to cure every major flood, but it can stop a lot of the water. I do not think you are going to get a flood-control measure unless you first go to a flood-prevention measure on the land at the forks of the creek where the water falls.

Mr. POAGE. We have spent a lot of money on flood control with very little flood prevention being carried on. Over the past 10 years I think we have averaged about $600 million a year on flood control; and a substantial part of that flood-control expenditure has been made, or at least a considerable portion, for the protection of some of the cities of Missouri. That was every dollar of it Federal money, was it not?

Mr. DAVIS. I believe so.

Mr. POAGE. That was a program which the Federal Government directed without any local advisers whatsoever, the Army engineers being the directing agency. It struck me as rather remarkable that the gentleman from St. Joseph felt so keenly that it was rank socialism for the Federal Government to assist districts in carrying on a program of conservation on the farms, and did not see fit to raise his voice against the program of flood control on the Missouri River paid for 100 percent by the United States Government. Did you observe that situation in his remarks?

Mr. DAVIS. Yes, at several points.

Mr. POAGE. I do not want to continue to review past testimony, but I do think we ought to proceed with carrying flood-prevention programs to the upper region of our streams.

Mr. DAVIS. We have got to do it. There is no question of that.

Mr. POAGE. Would you say that that is necessary for the people who live in the cities as well as for the people who live on the farms?

Mr. DAVIS. Absolutely.

Mr. POAGE. What would you say about this philosophy that the only responsibility for soil conservation falls upon the owner of the farm and upon no one else? I believe that philosophy was enunciated here a few moments ago. Do you accept that philosophy?

Mr. DAVIS. No, sir, I do not, not as long as I have children and probably grandchildren before too long. We have a responsibility to maintain this land of America.

Mr. POAGE. I agree with you in that. I agree with you that we do have a responsibility to maintain and to hand down workable, productive land in agriculture. But what about those of us who are living from day to day? What about those of us who live in the cities? I told you a while ago I am a town farmer. We depend for our water supply upon the lakes and some of our streams.

Many of those lakes, even after a long drouth in the Southwest, are nearly full—but not of water. They are pretty nearly full of silt. Do you think we can maintain our great cities? I am talking about this generation. I am not talking about future generations. Can we maintain our great cities unless we carry on conservation of our soil and water resources?

Mr. DAVIS. Of course not. We have got to keep that top soil which winds up as silt in these reservoirs back on the land; and this soil-conservation program is also a water-conservation program because you cannot divorce the two.

Mr. POAGE. Are the people of Houston—you live somewhere down close to that great city—directly interested in maintaining the soil, where it is on the upper reaches of the Trinity and the Brazos, rather than letting it be eroded and come down those streams and destroy their sources of water?

Mr. DAVIS. Very decidedly, and that is true of every town I know of.

Mr. POAGE. Do you feel, then, that the farmer who is possibly 200 miles upstream from Houston should bear all of the cost of a program which is absolutely essential to the city of Houston?

Mr. DAVIS. No, sir; it is just as much the responsibility of the—well, possibly more—city folks to keep that water pure and plentiful, as it is the farmer on whose land the rain initially falls.

Mr. POAGE. The gentleman from St. Joseph seemed to predicate his whole plea on the proposition that unless he could point to actual monetary profits to the farmer the program was bad. He felt that all the money should all be put up by the farmer, basing it simply upon that monetary proposition. Are there not actually greater opportunities to save money through intelligent soil conservation for the people of our cities than there are for the people that occupy the farms themselves?

Mr. DAVIS. Very definitely.

Mr. POAGE. Our cities are spending many times more in trying to provide for their public utilities than our farms are bringing in; are they not?

Mr. DAVIS. Yes, sir.

Mr. KING. I came in late and therefore I may be repeating. I understand that you are a cooperator and that certain practices exist on your own properties.

Mr. DAVIS. Yes, sir.

Mr. KING. What are the principal practices for which the Government pays you?

Mr. DAVIS. The practices for which the Government pays me?

Mr. KING. Yes.

Mr. DAVIS. I was talking more about the soil conservation district program rather than the agricultural conservation payments program.

Mr. KING. You do not participate in the agricultural payments?

Mr. DAVIS. Yes, I do. As I told the committee, I am a cooperator with five different soil conservation districts. In the past I guess I have gotten money for everything.

Mr. KING. What do you produce?

Mr. DAVIS. At my home place I produce beef. At my Waco place I produce beef. In east Texas I produce timber. In west Texas I produce beef, cotton, small grain, and feed stock.

Mr. KING. Does the Government help you buy your lime?

Mr. DAVIS. We do not use lime. The Government does give some assistance with superphosphate.

Mr. KING. Do you think the Government should buy you any part of your fertilizer at all?

Mr. DAVIS. Me personally?

Mr. KING. Yes.

Mr. DAVIS. No, sir.

Mr. KING. Is that not provided in this overall program?

Mr. DAVIS. That is provided in the ACP part of it. I believe that the Federal Government should do for the farmer what the farmer cannot do for himself.

Mr. KING. You say that your cooperation with this program has increased the efficiency of your own operations?

Mr. DAVIS. Very decidedly.

Mr. KING. Has that come about through just technical assistance, apart from the cash that you received in the program?

Mr. DAVIS. I would say 90 percent. The fact of the business is, I never predicate my farming operations on how much ACP money I will get. If in the normal course of my farming operations—which I try to make good farming operations—there is some ACP money, I try to get it. If there is not, I just go ahead and do it anyhow. I think most farmers in the country feel much that same way.

Mr. KING. The watershed problem, of course, is different from the actual crop production problem, and I am thinking of the whole overall Government assistance program. But in the production of crops, do you think that the Federal Government should help in any way with cash?

Mr. DAVIS. In the production of crops should the Federal Government help in any way with cash? I would not know how to answer that question as it is phrased.

Mr. KING. In your soil conservation district there are certain practices approved for which you can receive money. Those practices are generally set up by your own committees.

Mr. DAVIS. No, sir, they are set up by the ACP committee. That is not the soil conservation district board of supervisors.

Mr. KING. Are you speaking of strictly one rather than both of them?

Mr. DAVIS. My prime interest is in soil conservation districts.

Mr. KING. You are not in any way trying to justify the program, then, that I am trying to point out is a Government payment for practices in connection with production?

Mr. DAVIS. I do not believe I can answer it put just that way, Mr. King. I do believe that there is a good deal of justification for ACP payments on change of land use. For instance, in the Southeast where they have taken some of that wornout cotton land and are making it pastureland and livestock land—either beef or dairy cattle—the farmer runs into a terrific cost. It costs $40 or more per acre to do that job, and the small farmer cannot afford it.

Mr. KING. You agree, do you not, that we have a big surplus today of food production in this country?

Mr. DAVIS. Not entirely.

Mr. KING. You agree that the Government has had to buy a lot of foodstuffs in an attempt to support the markets?

Mr. DAVIS. Surely, the Government has bought a lot of stuff.

Mr. KING. Do you know of any soil conserving practice that is any better than abandonment and le'ting land grow up in weeds?

Mr. DAVIS. Just any one of them is better.

Mr. KING. Can you explain to me how you can control and hold the soil any better than by abandonment and letting the land grow up in weeds?

Mr. DAVIS. Sure. There are lots better ways than that. And besides that, weeds do not pay any money. You cannot live off weeds.

Mr. KING. You want to keep the land in production with profit-making operations?

Mr. DAVIS. That is what I am in the business for.

Mr. KING. But still we have too much of the operation going on in this country today.

Mr. DAVIS. I do not think so, Mr. King. We may have a surplus at a price. But at a price, I do not believe as long as there are hungry people in this world you can ever say any nation has too much food.

Mr. KING. In any sort of a system short of socialism, how are you going to regulate price except through the balance of supply and demand?

Mr. DAVIS. I do not know how you can regulate price. I know that is a very complicated subject. But one of the things that makes me an enthusiast for this soil conservation district work is that it makes for more efficient farming; it makes for lower costs of production and the farmers who are doing a good job of soil conservation work are not the ones that are going to be hit nearly as hard as the poor farmers who just are not doing the job they ought to be doing in the way of good farming.

I think this soil conservation district work is one of the big answers to the farmer's problem in that it shows him how to reduce his production costs. Even in the thirties when we were talking about surpluses, at the same time we had breadlines.

Mr. KING. You are speaking of education, whereas I am trying to emphasize the cash angle—payments for doing something that the farmer should as a businessman do for himself. The educational

program has improved the efficiency of individual farmers, and I might not object to the engineers being on the Federal payroll and going around with that special assistance.

But when the Government goes to paying out cash for the practices applied to single individual farms where they affect nothing but that individual farm, it seems to me that the Governemnt is going beyond reasonable limits in the stimulation of production which we do not need.

Mr. DAVIS. I have the results of the questionnaire right down the line of what you are thinking, Mr. King; that was also dreamed up and paid for by the national association, with no assistance at all from any Federal agency.

Mr. KING. What national association?

Mr. DAVIS. The National Association of Soil Conservation Districts. One of the questions there is: "Do you believe that farmers and ranchers should continue to receive payments for soil conservation practices?" This went only to the supervisors of the soil conservation districts. Would it be of interest to pass this around?

Mr. KING. What is the answer to that question?

Mr. DAVIS. There were 3,308 of them that said "Yes," and 1,823 said "No." But when you come to the next question: "In the event that Congress continues to make appropriations for financial assistance to farmers and ranchers in carrying out soil conservation practices, should such payments be made only for permanent-type practices?" there we have 4,270 yes's for permanent-type practices only, and 955 no's—which gives you a pretty good idea of what the soil conservation district supervisors of the country feel about how ACP should be handled.

Mr. KING. I judge from that that they definitely want to change the practices as they have in the past existed?

Mr. DAVIS. Yes, sir.

Mr. KING. To get away from this cash payment to the farmers for current crop production.

Mr. DAVIS. That is right. These permanent-type practices are mostly by way of change of land use, terraces and sodded waterways; and, as I say, taking old abandoned cotton land in the South and turning it into livestock production—that sort of thing.

Mr. KING. If I understood correctly, the personnel voting on the questionnaire, the fact that you had 1,800 votes against it from those fellows who have participated in the program is a strong indictment against the program as it has existed in the past.

Mr. DAVIS. No, we had 4,270 votes for permanent-type practices only. That is even stronger.

Mr. KING. I see the point. But your first question did not single out permanent-type practices, did it?

Mr. DAVIS. No, it asked in principle. If you will look at the geographical breakdown on this, you will see that there is quite a story about that. In other words, the parts of the country that have the most troubles economically are those that like ACP programs the least. For instance, on the Pacific coast, those 5 States plus Hawaii and Alaska voted 284 against any form of ACP to 221 in favor. Your upper Mississippi Valley—Illinois, Indiana, Iowa, up in there—voted 638 against any form of ACP to 511 in favor. Economics enters into it and the farmers' bank accounts.

Mr. KING. Yes, but do you know what you are asking farmers there

in that case is whether or not they favor a program from which they can get cash?

Mr. DAVIS. That is right.

Mr. KING. When you have even 25 percent of them voting against a program that offers them cold cash for nothing, it is a terrible indictment of the program. If the program were logically sound, you should have 98 percent of them voting in favor of it.

Mr. DAVIS. Mr. King, I do not believe you could get 98 percent of the farmers to agree that today is Thursday. These farmers have to do a little thinking of their own. I just do not believe we would get 98 percent of them to agree to anything.

Mr. KING. I am inclined to agree with you on that. But, after all, the question is badly weighted when you ask farmers to vote for or against a program that is offering free assistance.

Mr. DAVIS. All we were asking them to do was to vote for or against the program as it existed at that time. This went out the 5th of January of this year.

Mr. GATHINGS. Would the gentleman yield?

Mr. KING. Surely, go ahead.

Mr. GATHINGS. Mr. Chairman, I would like to ask unanimous consent that this tabulation be incorporated in the record.

The CHAIRMAN. Without objection it will be made a part of the record at this point.

(The pamphlet is as follows:)

FINAL RESULTS—HOW FARMERS WANT SOIL CONSERVATION HANDLED

FINAL REPORT

(1953 Opinion Survey, National Association of Soil Conservation Districts)

On January 5, 1953, the National Association of Soil Conservation Districts mailed an individual questionnaire to 12,574 farmers and ranchers who are serving as supervisors, commissioners, or directors of local soil conservation districts.

The questionnaire asked their own, personal opinion on the six questions listed below. It was in the form of a numbered, detachable post card and was accompanied by this message:

Dear Friends: My travels since election day have convinced me that the coming Congress will consider legislation that will materially change the national soil conservation picture.

There are a number of ways such changes may go. One group is advocating that the land-grant colleges and State extension services take over all soil conservation work. Under this proposal, districts would get technical help from specialists attached to county agents' staffs.

Others believe there is local confusion and duplication between the efforts of soil conservation districts and ACP county committees which must be eliminated. Several proposals for doing this are being considered.

One short month from today the seventh annual convention of your National Association of Soil Conservation Districts meets in Omaha where the legislative committee will draft recommendations to Congress.

To make certain that the committee report reflects the views of the majority of America's 12,574 supervisors, commissioners, and directors, this card, with the questionnaire attached, is being sent to each of you individually.

It is not necessary to call a special board meeting to answer the questions. All members of your board are receiving the same questionnaire. We want your own, personal opinion.

And, please, do it today. There isn't much time before the convention.

WATERS S. DAVIS, Jr., *President.*

By March 1, 1953, a total of 5,353 questionnaires had been returned to national association headquarters, League City, Tex. The results are shown below.

Many farmers, who heard about the questionnaire, voluntarily sent in answers to the questions. However, only those were counted which were returned on the official printed, and numbered, ballot card. Unsigned ballots were not counted.

State	I. Would you approve a proposal to turn the Soil Conservation Service over to the land-grant colleges and State extension services, with technical assistance to districts furnished by assistant county agents?			II. Should the Soil Conservation Service continue to be the agency responsible for furnishing technical assistance to farmers and ranchers through soil conservation districts?			III. Do you believe that farmers and ranchers should continue to receive payments for soil conservation practices?			A. In the event that Congress continues to make appropriations for financial assistance to farmers and ranchers in carrying out soil conservation practices—should such payments be made only for permanent type practices?			B. Should the Soil Conservation Service be transferred to the agricultural conservation program branch of the Production and Marketing Administration with county agricultural conservation program committees directing a unified soil conservation program?			C. Should agricultural conservation program be transferred to Soil Conservation Service with soil conservation districts directing a unified soil conservation program?		
	Yes	No	[1](?)	Yes	No	[1](?)	Yes	No	[1](?)	Yes	No	[1](?)	Yes	No	[1](?)	Yes	No	[1](?)
United States totals	573	4,594	186	4,975	237	141	3,308	1,823	222	4,270	955	128	277	4,893	183	3,285	1,733	335
Northeast:																		
Connecticut	.....	18	.....	18	.....	.....	12	4	2	12	5	1	.....	17	1	10	4	4
Delaware	.....	3	.....	3	.....	.....	2	1	.....	2	1	.....	.....	3	.....	2	.....	1
Maine	4	33	1	36	1	1	20	18	.....	26	12	.....	1	37	.....	27	10	1
Maryland	9	40	2	47	4	.....	29	22	.....	40	10	1	1	50	.....	27	23	1
Massachusetts	6	17	1	20	1	3	12	12	.....	20	4	.....	2	22	.....	14	10	.....
New Hampshire	4	13	.....	15	.....	2	11	4	2	15	2	.....	2	15	.....	10	7	.....
New Jersey	3	4	1	7	.....	1	5	2	1	4	3	1	.....	8	.....	2	4	2
New York	3	67	6	74	1	1	35	35	6	56	18	2	1	71	4	46	23	7
Pennsylvania	10	54	3	63	2	2	36	26	5	54	9	4	6	55	6	42	16	9
Rhode Island	.....	3	.....	3	.....	.....	3	.....	.....	3	.....	.....	.....	3	.....	2	1	.....
Vermont	1	21	.....	24	.....	1	19	5	1	18	5	2	.....	25	.....	24	.....	1
West Virginia	2	46	.....	47	1	.....	41	7	.....	36	12	.....	4	43	1	36	11	1
Area total	42	322	14	357	10	11	225	136	17	286	81	11	17	349	12	212	109	27
Southeast:																		
Alabama	4	49	1	51	3	.....	48	5	1	41	13	.....	1	53	.....	31	22	1
Florida	30	120	5	131	20	4	84	66	5	113	36	6	11	136	8	68	74	13
Georgia	4	85	2	88	3	.....	79	10	2	58	30	3	5	85	1	58	31	2
Kentucky	13	245	3	252	6	3	219	34	8	204	53	4	23	232	6	155	93	13
Mississippi	12	116	4	122	7	3	114	14	4	97	35	.....	6	121	5	75	47	10
North Carolina	9	104	1	108	5	1	93	19	2	91	23	.....	5	103	6	59	51	4
South Carolina	7	76	.....	79	3	1	53	25	5	73	10	.....	6	76	1	54	27	2
Tennessee	3	80	2	81	2	2	77	6	2	58	25	2	6	78	1	43	38	4
Virginia	11	52	6	62	3	4	32	33	4	53	13	3	3	64	2	25	37	7
Puerto Rico	2	10	.....	12	.....	.....	12	.....	.....	5	6	1	1	11	.....	6	6	.....
Area total	95	937	24	986	52	18	811	212	33	793	244	19	67	959	30	574	426	56

Upper Mississippi Valley:																		
Illinois	25	165	9	191	4	4	57	134	8	176	17	6	3	188	8	127	58	14
Indiana	17	121	2	130	5	5	69	68	3	106	33	1	6	133	1	89	46	5
Iowa	27	197	12	220	11	5	104	121	11	208	20	8	5	224	7	140	80	16
Michigan	36	117	9	147	12	3	43	113	6	128	26	8	1	158	3	97	57	8
Minnesota	13	97	5	107	5	3	59	48	8	94	19	2	5	107	3	79	30	6
Missouri	6	59	2	61	5	1	51	10	6	42	24	1	10	55	2	28	33	6
Ohio	33	170	11	197	8	9	87	121	6	182	28	4	2	210	2	113	85	16
Wisconsin	11	51	6	62	3	3	41	23	4	51	14	3	7	60	1	43	18	7
Area total	168	977	56	1,115	53	33	511	638	52	987	181	33	39	1,135	27	716	407	78
Western Gulf:																		
Arkansas	8	126	4	130	5	3	115	18	5	105	32	1	7	125	6	86	43	9
Louisiana	3	67	2	70		2	63	9		41	30	1		69	3	33	32	7
Oklahoma	11	175	7	181	4	8	155	28	10	152	35	6	4	185	4	143	40	10
Texas	39	316	6	333	22	6	248	93	20	250	104	7	25	322	14	247	95	19
Area total	61	684	19	714	31	19	581	148	35	548	201	15	36	701	27	509	210	45
North Great Plains:																		
Kansas	28	198	7	220	8	5	179	45	9	215	15	3	18	207	8	130	83	20
Montana	11	86	1	90	4	4	62	30	6	83	13	2	5	89	4	65	28	5
Nebraska	9	205	16	224	3	3	128	87	15	215	10	5	7	212	11	167	46	17
North Dakota	23	75	6	96	5	3	72	29	3	78	21	5	2	95	7	62	36	6
South Dakota	10	155	6	158	10	3	134	31	6	119	50	2	17	147	7	94	68	9
Wyoming	14	57	2	63	5	5	42	31		60	9	4	4	66	3	45	24	4
Area total	95	776	38	851	35	23	617	253	39	770	118	21	53	816	40	563	285	61
Southwest:																		
Arizona	7	51	3	52	5	4	36	21	4	55	6		8	52	1	41	18	2
Colorado	25	261	4	263	18	9	198	81	11	236	43	11	19	251	20	180	93	17
New Mexico	11	75	2	79	7	2	57	26	5	79	7	2	10	74	4	48	33	7
Utah	7	70	2	73	6		51	24	4	64	14	1	7	71	1	63	14	2
Area total	50	457	11	467	36	15	342	152	24	434	70	14	44	448	26	332	158	28
Pacific:																		
California	15	139	8	152	4	6	58	95	9	142	15	5	3	150	9	116	33	13
Idaho	7	61	4	65	2	5	26	43	3	67	4	1	1	70	1	44	22	6
Nevada	9	33	1	38	2	3	18	24	1	41	2		2	40	1	30	10	3
Oregon	19	54	4	61	9	7	45	30	2	60	12	5	7	64	6	45	24	8
Washington	10	145	7	158	3	1	66	89	7	136	23	3	5	174	3	106	47	9
Hawaii	1	6		7			5	2		5	2		3	5	1	5	1	1
Alaska	1	3		4			3	1		1	2	1		4		3	1	
Area total	62	441	24	485	20	22	221	284	22	452	60	15	21	485	21	349	138	40

[1] No answer, or intent of voter in doubt.

Mr. BELCHER. A few minutes ago you referred to Mr. Hope's bill. Have you analyzed that bill? Have you read that bill carefully?

Mr. DAVIS. I have not read it carefully. I just read it through once.

Mr. BELCHER. I have not either, but I am just wondering, while you are on the stand here, what you thought about that bill.

Mr. DAVIS. I think it is fine. That is the one that was just introduced this week. I think it is fine.

Mr. POAGE. Mr. Davis, I just wanted to ask you, as one who has seen some of this west Texas land, and land in all of the semiarid West is the same way, what would happen if we were to follow the suggestion that the gentleman from Pennsylvania has made several times of just turning land out and letting it grow up in weeds? What would happen when you turn out a field that has heretofore been plowed anywhere in the semiarid part of the United States and let it grow up in weeds? What happens from the standpoint of erosion?

Mr. DAVIS. You get lots of erosion and in west Texas you would get a good stand of mesquite that would cost a lot of money——

Mr. POAGE. When you get a stand of mesquite trees it will, of course, cost a great deal to get rid of them. When you get a stand of grass, when you get a turf on that land, you get less erosion, but how do you get grass?

What do you get when you have got sunflowers and cockleburs and broom weeds on it?

Mr. DAVIS. You have got a tax reduction.

Mr. KING. Will the gentleman yield?

Mr. POAGE. Yes.

Mr. KING. What did happen to the Dust Bowl? Was it abandoned?

Mr. POAGE. I will tell you what happened. The Soil Conservation Service moved in there, applied the practices, many of the very practices that you have been condemning here. The Soil Conservation Service showed the man how to do it, and then the ACP payments came along and gave him some help in listing that land.

Listing is nothing in the world except just running an implement along there and throwing your land up in beds. Listing is not a permanent practice, but it keeps land from blowing away during the dry period. They taught us to leave the stubble of a maize field on these lands. They taught us to plant strips of maize and crops that would stop the wind from blowing through any clean cultivated field.

That is what they did about it, and they stopped most of that land from blowing away. They took some of it, which was the worst and put it back into grass. But they did not turn it out to weeds because had they done so, it would still be nothing but a bare spot out there. That country does not quickly go back into grass. It takes 40 or 50 years for that country to go back into grass. It does not return to grass unless somebody spends a lot of money on it and does something about it.

You cannot just turn that country out to weeds. You will get some sunflowers and you may get some cockleburs, and in about 3 years you will get some broom weeds, and in about 4 years you will get some milk weeds; and in about 20 years you will begin to get a few patches of mesquite grass. And in 40 years you may have mesquite and grama grass on the land.

Mr. KING. Then you are talking about an area which is so arid that none of your practices will do any good either.

Mr. POAGE. They have done a great deal of good.

Mr. KING. The Soil Conservation people did actually recommend abandonment; and furthermore, they paid for abondonment. Where there was any sort of a cover from the previous crop at all, they recommended abandonment and paid the farmer for pure abandonment to leave that cover there.

If you are talking about some of the Texas land, I know any sort of a program is impossible.

Mr. POAGE. I am talking about more than one-half of the land area of the United States; I am talking about the area that produces two-thirds of all the wheat of the United States; the area that produces approximately one-third of all of the cotton of the United States.

I am talking about the area that provides the biggest part of the beef of the United States. I am talking about an area that is of vital importance in American agriculture and that we have to have to feed our people; and I am talking about people who are entitled to consideration just the same as the people of other sections of the United States.

When we tell them simply to throw their land out in weeds and they cannot even get a cover of weeds and that land is going to wash off, blow off, erode such as it never eroded before, it seems to me it is utterly impractical and fantastic.

You do not get a cover on one-half the lands of the United States by letting it grow up in weeds.

Mr. KING. There is no better soil-conservation practice in any area that has 13 inches of rain a year than to abandon it, and it can be proven in every section of the United States. If there is enough rain there to grow your soil conservation crops, it will grow weeds that will hold the land.

Mr. POAGE. I have lived in a country that had about 22 inches of rainfall and the grass will not come back in less than 20 to 40 years if it is just left alone.

Mr. ALBERT. Do you know whether a similar questionnaire has ever been sent out to the county PMA committees?

Mr. DAVIS. I am pretty sure it has not.

Mr. ALBERT. You would probably get just the opposite answers, would you not?

Mr. DAVIS. You might. There are a lot of those who answered that questionnaire who were PMA committeemen in some States where county agents were secretaries of Soil Conservation districts. They got the questionnaires.

Mr. ALBERT. In Oklahoma my experience is that the districts and the committees both think their respective sides should be emphasi ed.

Mr. DAVIS. I know it, and I get lots of fun arguing with them. Sometimes I get my hair parted, too.

Mr. JONES. I think this might well be a good time to make a comment. I make this because of the statement made by the gentleman from Texas, Mr. Poage, with reference to the previous witness, Mr. Embrey, who was here speaking about Missouri and was speaking apparently in opposition to soil-conservation districts.

I might say that I only met Mr. Embrey the night before last, and I am sorry that he is not here in the room now to hear this statement, because I am merely expressing an opinion. He is here attending the meeting of the United States Chamber of Commerce, and I think that

he was expressing the philosophy of the United States Chamber of Commerce, rather than the farmers of Missouri who are beginning to get into this soil conservation.

I might say in that connection in my home county of Dunklin there is a coo, eration between the Extension Service and the Soil Conservation Service, since the county agent in that county is the secretary of the Soil Conservation district. They do work together very nicely, and that work is bearing good results and is also creating additional interest throughout southeast Missouri where other Soil Conservation districts are being formed.

I just want to get that in the record. Thank you.

The CHAIRMAN. Any further questions?

Mr. MCINTIRE. Just one short question. In relation to your column 3 in this last survey you referred to, do I understand correctly that the reference here is to the ACP program?

Mr. DAVIS. Yes, sir; that is the only one that makes payments.

Mr. MCINTIRE. I appreciate that. I just wanted to be doubly sure that that was the reference in this tabulation. Thank you.

The CHAIRMAN. If there are no more questions, we thank you very much, Mr. Davis, for your statement.

We will next hear from Mr. Charles H. Collison, representing the National Wildlife Federation.

STATEMENT OF CHARLES H. COLLISON, NATIONAL WILDLIFE FEDERATION

Mr. COLLISON. Mr. Chairman and members of the committee: I am conservation director of the National Wildlife Federation. The National Wildlife Federation is a federation of State wildlife federations or conservation associations. They go by various names. Presently we have affiliate organizations in 47 States.

Membership of these State organizations is made up to a large degree of people who are interested in wildlife conservation, hunting, and fishing; those who are also interested in wildlife resources because they like to go out and see them or take pictures of them or enjoy the outdoors in various ways.

Our organi ation is extremely interested in this whole question of soil conservation and watershed treatment, flood control, or flood prevention, because we recogni e that you cannot have abundant wildlife resources or good living in this country unless you begin with the basic resources which are soils and water.

We have contended for many years that American flood-control policy has hitched the cart before the horse. In the development of our flood-control programs back through history, we looked at the main streams where the waters rolled out over the natural flood plains, submerging crops, farmhouses, and occasional towns. We saw the damage where it was most spectacular, and we sought to apply the remedy there.

We built levees and big dams, and as the floods became more frequent and more disastrous, we built higher levees and bigger dams. It has been like trying to cure tuberculosis by feeding the patient cough sirup and rubbing rouge on his cheeks.

The fact is neither can floods be prevented nor their major damage controlled by building mainstream dams and levees. That is because

floods have their origins in the uplands, in the watersheds of the rivers; and there also they cause most of their damage.

By the time it reaches the lower valleys, a flood already is a fact. We cannot hope to prevent it at that stage. The best we can do is seek to contain it by huge engineering works, and at terrific cost.

Nearly all the damage in the headwater areas is in the form of soil erosion, gulleys down the hillsides, sheet erosion in the corn fields, bottom lands covered with sterile clay, creek banks washed out and new channels ripped across fertile fields. Most of such damage is irreparable, a tragic leak in the national breadbasket which, if not checked, can spell eventual ruin for the world's most prosperous nation.

Mr. Chairman, the National Wildlife Federation has long contended that the major emphasis in our flood control programs has been mistakenly placed, that it should be shifted to the headwaters, to the tributary streams, and to the forests and fields of the watershed. Therefore we are highly in favor of any legislation that will bring about such a shift in emphasis.

Federal participation in or aid to local watershed districts or conservation districts we believe would go a long way toward bringing about that desirable shift of emphasis. We recognize that it has got to be a local program, local in application; but we do believe that it can be speeded up a great deal by various kinds of Federal participation or Federal assistance to the local districts.

Besides that a general point I want to make is that we believe that more work, more emphasis needs to be spent on this soil-conservation program and on flood prevention beginning in the small watersheds. I would like to make one more particular point very briefly, and this is speaking in behalf of the 30 million Americans who are interested in hunting and fishing and other millions who are interested in wildlife and preserving the natural beauties of America; and included among those are a great many farms.

By a coincidence—I say by a coincidence because one of the previous witnesses was from the State of Missouri—I grew up in the State of Missouri, grew up on a farm. My brother, incidentally, operates his farm under the balanced farming program in Monroe County, Mo., the farm that I grew up on.

I know how interested he is in hunting and fishing and in his neighbors. He does a great deal more of it—goes to South Dakota to hunt pheasants; he goes to southern Missouri to hunt deer; he fishes in various places—than I, whose work is in the field of wildlife conservation.

Farmers are interested and will be interested in coordinating wildlife management and wildlife conservation in this overall program; and that is simply the other point I would like to make.

I would like to recommend that in any legislation which may be developed to aid or to encourage or speed up a flood-prevention and overall soil-conservation program in the watersheds that wildlife planning be cut into the program. I would like to make this suggestion as to how that might be done.

Somehow bring in to these activities at the planning stage the State game and fish department or the State forestry division, and the agency in the State that has to do with recreation—if there is a certain

agency; sometimes all those activities are centered in one department, the State conservation department.

Provide for participation by the technical personnel of those State agencies in the planning phase. They have very fine personnel. Some of these State conservation departments are well equipped with trained technicians who can lend assistance not only insofar as wildlife practices are concerned, but can help the local districts or the local farmers lay out their farm ponds, locate their ponds, lay out their terraces, plan for living fences which fit into the overall conservation program as well as benefit wildlife.

Soil conservation does benefit wildlife because it takes fertile soils to produce the food and cover necessary to produce wildlife. But sometimes it just takes a little extra planning to really get results. That is, someone who suggests that perhaps this pond could as easily be located over here next to the wood lot or next to this multiflora rose fence, where it would be used more frequently by wildlife than over on the other side of the fence—just little techniques like that that can go into the planning.

I would like to suggest that you will succeed in getting more widespread public support and participation in your overall program if you do provide for the participation of wildlife conservation agencies in it; provide for that participation at the planning stage, because that brings into the picture a lot of people who will assist in various ways because of that.

Probably one segment of the public which has been most critical of the Army engineering approach to flood control has been wildlife conservation people. That criticism has been directed at the lack of the overall planning in the Army engineer's program. They have felt that all resource values were not taken into consideration. For that reason many of the Army engineer projects have been most bitterly opposed—in some cases they have been blocked—by conservation agencies on that particular ground, that the proposed projects would do more damage to soil and wildlife and other natural resources than the benefits that would accrue as a result of their construction.

Mr. Chairman, that concludes my testimony and my suggestions and recommendations. I would be happy to try to answer any questions.

The CHAIRMAN. We thank you very much, Mr. Collison, for your statement. Mr. McIntire has a question.

Mr. MCINTIRE. Your work through your association is pretty well decentralized into State and county associations, is it not?

Mr. COLLISON. That is right.

Mr. MCINTIRE. Those county or what you might call local associations are no doubt familiar with the farm groups that are either directly or indirectly working with conservation problems, soil-conservation problems on the land. Do you have any comment from any of your associated groups as to their attempt to work with the soil conservation district supervisors, and what has been the result of any of those attempts to get a mutual understanding as to the objectives of the respective groups?

Mr. COLLISON. In general, Mr. McIntire, I would say that our local and State federations, wildlife associations, have been pleased by the cooperation that has been forthcoming from the soil conservation

districts and the Soil Conservation Service. They have felt that the Soil Conservation Service in general has attempted to take into consideration wildlife values and work into their farm plans measures for the protection and conservation and improvement of wildlife conditions.

The CHAIRMAN. Any further questions?

Mr. HOEVEN. Your views are not at variance with those of the Izaak Walton League, are they?

Mr. COLLISON. No. The Izaak Walton League and the National Wildlife Federation generally stand side by side in these matters.

The CHAIRMAN. We thank you very much, Mr. Collison, for your appearance.

We will next hear from Mr. Joseph F. Kaylor, representing the Association of State Foresters.

STATEMENT OF JOSEPH F. KAYLOR, ASSOCIATION OF STATE FORESTERS

Mr. KAYLOR. Thank you, Mr. Chairman. I appreciate this opportunity to appear before the committee. My name is Joseph F. Kaylor, representing the Association of State Foresters. I wish to present my statement regarding conservation bills now before this Committee, namely Hope bill, H. R. 4877; and Poage bill, H. R. 559.

The association which I represent is responsible for many of the upstream forestry activities which contribute an important part in flood control in these United States. The forty-five states with organized forestry departments are responsible by State law for forest-fire protection in the uplands on some 461 million acres of land. In addition there is a growing acreage of land being reforested each year.

H. R. 559 as introduced places the responsibility of preparing and carrying out plans for improvements in flood control under the Soil Conservation Service of the Department of Agriculture. We are not in favor of this type of legislation since it obliterates State lines, creates confusion and eliminates existing present-day cooperative methods which are restoring or maintaining protective cover by reducing the number of fires.

We therefore suggest that in H. R. 559, page 3, line 2, all reference to the authority being granted the Soil Conservation Service be deleted and that the Secretary of Agriculture be the only authorized official named in the bill or bills as revised. H. R. 4777 meets this need. Again with reference to H. R. 4877, we recommend the addition of the word "forest" following the word "soil," and comma, line 8, page 1, and line 19, page 2.

I should like also to call to your attention the fact that there are two other phases of forestry which are the responsibility of the respective State foresters. They are: reforestation which are under order number 1278 is under the direct administration of the State forester in cooperation with the United States Forest Service. To change the law now to bring in another agency would create considerable confusion. We therefore recommend that the present Clarke-McNary Act be continued as the method of effectuating action programs on the ground.

The third phase which we are concerned with is the cooperative forest management which is available to all private landowners. To

date this cooperative action and service program is bringing about good forestry practices on millions of acres of land each year. This cooperative effort on the part of both the Federal Forest Service and the States also sets up standards for flood control which adhere to the principles of private land management. It is also bringing a change in the attitude of owners which we have not been able to accomplish by any other method. This program is not a subsidy, but one which promotes broadening of the tax base for all public agencies.

In closing I should like to say that our recommendations to the committee are to leave existing flood-control activities as they affect cooperative programs in forest fire control, reforestation and private forest land management under the present Federal-State authorities. We would also like to point out to you that any benefits to be derived should first determine whether the total benefits exceed the total cost. We are confident that any such program will meet with hearty approval and acceptance at the grassroots.

In your deliberations we also request that you make adequate provision for servicing an action program. At present local foresters are spending 25 percent of their time in servicing the Agricultural Conservation Program and the PMA permanent practices program, with no compensation for this technical aid coming in return to the respective States.

Your permission is hereby requested to file an extended statement at a later date.

The CHAIRMAN. We thank you very much. I will have some one of the staff keep in touch with you on these matters. Are you here in Washington? Can we get in touch with you regularly?

Mr. KAYLOR. Mr. Chairman, I am in Annapolis. But members of your staff know how to reach me.

The CHAIRMAN. Mr. McDonald, it looks as if we are right up against the last 5 minutes. We certainly do not want to confine you to 5 minutes. Could you come back tomorrow?

Mr. MCDONALD. Yes, sir.

The CHAIRMAN. You will be the first witness tomorrow at 10 o'clock.

The committee will adjourn until 10 o'clock tomorrow.

(Thereupon, at 11:55 a. m., the committee adjourned until Friday morning, 10 a. m., May 1, 1953.)

SOIL CONSERVATION AND WATERSHED PROGRAMS

FRIDAY, MAY 1, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 a. m., in room 1310, New House Office Building, the Honorable Clifford R. Hope (chairman) presiding.

The CHAIRMAN. The committee will come to order. When we concluded yesterday we had not had time to hear Mr. Angus McDonald, representative of the National Farmers Union, who had been scheduled for that day. Mr. McDonald very kindly agreed to come back today, so we will start our hearings this morning with his statement.

STATEMENT OF ANGUS McDONALD, ASSISTANT LEGISLATIVE REPRESENTATIVE, NATIONAL FARMERS UNION

Mr. McDONALD. Mr. Chairman and members of the committee, my name is Angus McDonald. I am assistant legislative representative of the National Farmers Union. If it please the committee, I will read a statement on behalf of James G. Patton, national president. [Reading:]

Mr. Chairman and members of the committee, we appreciate the privilege of presenting our views on the subject of soil conservation and related matters. Our members have not only been interested in the problems of soil erosion, sedimentation, and flood control ever since the Soil Conservation Service was established in 1935, but have had to face these problems on their own farms for many years previous.

Although various soil-conservation programs, which involve terracing, contouring, crop rotation, and various practices designed to lessen the harmful effects of wind and water on the soil are only a little more than 25 years old, it is not an exaggeration to say that the problem of soil erosion has been with us ever since the first farm was abandoned in America because of declining yields. The traditional practice in our country has been to denude an area of vegetation, mine the soil, and when the area was exhausted go to a new area and repeat the process. This has happened over and over and over throughout our history.

The fact that the problem is an old one is indicated by the writing and activities of such men as Thomas Jefferson, who invented a plow to be used in the contour, and by Edmond Ruffin, of Virginia, who spent almost his entire life attempting to solve the twin problems of soil erosion and soil exhaustion. I call the committee's attention to several publications of the Soil Conservation Service—Early Erosion Practices in Virginia, and Early American Conservationists, which were published by the United States Department of Agriculture as miscellaneous bulletins. These publications indicate that numerous individuals recognized the problem of soil erosion more than a hundred years ago. They also indicate that such individuals were always in the minority and that their activities did little to check soil erosion, which was bringing about destruction and depletion of millions of acres of land each year. In addition to individual activity numerous societies and educational institutions carried on the fight against erosion, but the evidence

is overwhelming that little or no progress was made until the Federal Government entered the picture.

The duststorms in the thirties were not an unmixed evil because they dramatized the problem of erosion and were responsible for the rapid expansion of the work of the Soil Conservation Service and the Agriculture Adjustment Administration, which later became the Production and Marketing Administration. The enormous expansion of the activities of these agencies was accomplished by a similar expansion of related agencies, including the Forest Service in the Department of Agriculture, the Bureau of Reclamation in the Department of Interior, and the Army Engineers.

We have now more than 25 years of experience to draw on in evaluating the work of these various agencies. I will comment later on the relation of Army Engineers and the Bureau of Reclamation to the Department of Agriculture's soil conservation program. Without going into too much detail I would like to indicate to the committee that all of our experience and information convinces us that the problem of flood control cannot be separated from the problem of what to do with a raindrop when it falls, and what to do with water at every stage on its long journey to the sea. Various studies of the Soil Conservation Service document show what we have long known, that removal of natural vegetation has disastrous effects on the topsoil. Under natural conditions, except in frigid and arid areas the processes of nature act not only to create soil, but to protect and preserve it. Under natural conditions scientists tell us that erosion is responsible for creating approximately the same amount of soil underneath that is washed away on the surface. They tell us that there is a balance in the physographic situation which tends to add to the fertility of the soil and not deplete it. They tell us also that when man enters the picture he upsets this balance of nature and brings about accelerated erosion.

Research in the Soil Conservation Service indicates that soil is not only removed when ground is denuded by streams of water but by raindrops themselves. These studies indicate that each raindrop splashes soil particles into the air at its point of impact. These actions appear in photographs somewhat like miniature "bombs". During a violent rainstorm these "bombs" may blast into the air more than 100 tons of soil per acre. On sloping lands this splashed soil migrates downhill, a type of erosion known as "splash erosion." On level lands soil particles are often splashed loose from the surface and suspended in the running water. Tests show that some soils constitute 20 percent of the volume of water during periods of violent rainfall.

Research work in the Soil Conservation Service has at least partially provided solutions to the problems created by such situations. Soil splash, the SCS found, could be almost eliminated by protecting bare soil with a mulch. It was also found that protection varied directly with the type of soil cover and type of soil. Runoff also varied with the type of protection. During one experiment it was found that the runoff from fallow land amounted to 8½ inches, and from bluegrass only 1.4 inches. On wooded land during another experiment there was no surface runoff whatsoever after 41½ inches of rainfall over a period of time, while on bare ground there was 11.3 inches.

It seems obvious to us that if water can be held where it falls or at least delayed that floods would be lessened. Floods, we believe, originate not at the mouths of tributaries or in main channels, but at points in the watershed farthest away from these points. A simple calculation can prove that nearly all of the water responsible for the disastrous floods in the Missouri the last few years originated hundreds of miles away over an area of thousands of square miles. The problem, it appears, can be solved upstream, if it can be solved at all. After enormous amounts of water have been carried by hundreds of small tributaries to a large stream it is often impossible for man to check or contain the water. This has been proved over and over again. It seems to us, however, that disastrous effect of floods might be lessened by widening or straightening the channel in order to prevent overflow and to speed the water to the sea. It is obvious that if obstructions were placed in the way, or dikes are built, which narrow the channel, the floods will be increased. According to some authorities, this is what has actually happened the last few years.

The Army engineers, interested in only grandiose, expensive projects, have attempted to control floods and impound waters for navigation purposes by building gigantic dams on main streams. They have also built many structures along the banks of streams which tended to decrease the width of the channel during flood periods. The simple result has been that the crest of the flood was proportionately higher after the building of structures which sought to contain the stream.

It has been charged by those critical of the Army engineers that such a situation derived, at least in part, from faulty surveying and planning. Another

result has been the building of structures, it is contended, that were either too low or too high and the planning of projects which were economically unsound. The welfare of agriculture generally, it is claimed, has been ignored by the Army engineers. According to a number of groups and prominent individuals the engineers have flooded thousands of acres of rich bottom land unnecessarily. They have ignored the source of floods which exists hundreds of miles above the points where they have built or have planned to build a great dam.

The jealousy and competition which exists between the Army engineers and the Bureau of Reclamation is well known. These two bureaus have competed for projects and have hastily obtained authorization in the race to spend taxpayers' money. The situation exists in part because of overlapping jurisdiction in the law. Congress has delegated to the Army engineers the major responsibility for Federal Government in the prevention and control of floods, but other agencies, including the Department of Agriculture have the major responsibility in watershed protection and land-use management involving no Federal lands.

This work is divided between the Soil Conservation Service, the Agriculture conservation program, and programs which include Federal assistance in forestry. For reasons above stated, it is obvious that this work should be integrated and coordinated with any broad flood-control program. Yet, there has been a singular lack of cooperation in regard to flood control with the Department of Agriculture by either the Army engineers or the Bureau of Reclamation. The Bureau of Reclamation not only shows little interest in watershed programs but actually is critical of any upstream program which is proposed by the Department of Agriculture. I refer to the attitude of the Bureau in regard to the proposal of the Department to build hundreds of small dams, farm ponds and other structures, all designed to lessen rapid runoff and in the long run prevent or minimize floods.

It seems to us that any flood-control policy should require a consideration of all factors involved, however remote. No dam should be built without a complete survey of the watershed to determine not only the long time physical and economic effects of a proposed single structure but to present alternative methods of building smaller and more numerous dams which not only would contribute to the prevention of floods but would conserve water for irrigation and for natural use for the citizens who live in the area where the water actually falls.

I do not intend to go into the question of whether or not the Army engineers or the Bureau of Reclamation, or private groups are correct in their contention that there is either sufficient or insufficient water under this or that plan for irrigation of navigation purposes, but it seems obvious that before the Congress spends billions of dollars in building gigantic structures, that the agencies demanding funds for the projects should be forced to present complete surveys and plans, and that these plans and surveys should be subjected to the harshest scrutiny. If the plans of these agencies do not stand up after analysis then the project should be stopped in its tracks and the whole plan reviewed by all agencies of the Government who are directly or indirectly related.

It has been suggested that the Hoover Commission's recommendation in regard to review of flood control, navigation and other projects might prevent costly mistakes in the future and save the taxpayers billions of dollars. Certainly there should be some method devised by the Congress or the President which would act as a check on the agencies concerned with flood control. The national policy should attempt to bring about maximum sustained use of lakes, rivers, lands, and ground water resources at the cheapest cost. It should safeguard the soil from leaching, soil erosion and floods. It should take into account the needs of these resources to support an expanding economy and for national security. It should also consider recreational opportunity, public health, water transportation and electric power.

Soil conservation practices and amendments should not only safeguard these things, but should bring about a sustained agricultural production as well as safeguard the soil itself. That the soil is our most precious asset will bear repeating. The programs within the Department of Agriculture relating to soil and water conservation should be expanded, not curtailed. The problem of conserving soil on an individual farm is of national concern. I have attempted to show the birth of floods occurs on farms where the natural vegetation is removed. An integrated policy which would bring about soil conservation on the individual farm and at the same time prevent floods is not a matter merely for the local political unit to determine. I would like to emphasize however, that the individual farmer and the local Soil Conservation Service man, as well as the county agent, have the greatest knowledge and know-how in regard to soil conservation.

We have learned from the Soil Conservation Service through its research and surveys that each farm varies in its capability and that its treatment should vary. Local people should carry out the bulk of soil conservation work. In many instances, however, it is necessary to bring together groups on problems concerning wide areas. It seems to us, logical that groups be set up to plan flood control, and soil conservation, should be based on the watershed. County and State committees cannot wholly do the job because water and rainfall does not respect State lines. The causes of a flood affecting a community, town or city usually lies in another State.

We suggest, therefore, that watershed committees be set up if they do not already exist in every watershed, great and small, throughout the Nation. We further suggest, that these committees be democratically elected by the residents in the respective watersheds, and that the agencies, including the Army engineers, Bureau of Reclamation, and Department of Agriculture be required to work with and consult with these committees in planning any project. In addition, the Congress should require the different Federal agencies to work together and consult with one another. It should direct the Secretary of Agriculture to coordinate flood control and soil conservation and forestry work.

We do not suggest the curtailment or elimination of any existing program.

We would like the work of the county and State committees continued on the greatest possible scale. We urge that soil conservation districts be encouraged and aided in every way by increased technical assistance from the Soil Conservation Services. Finally, we urge an expansion of research. We feel that the surface has only been scratched in regard to knowledge relating to sedimentation of reservoirs, evaporation, transpiration, infiltration, rain fall and surface runoff.

In conclusion, I would like to emphasize the importance of developing an integrated program which brings about maximum utilization and development of our soil and water resources. The livelihood of our people, as well as our existence as a nation depend on their conservation. We are committed to a titanic contest in which the proper utilization of our soil and water resources may prove the ultimate determinant of our strength.

The CHAIRMAN. We thank you very much, Mr. McDonald, for presenting Mr. Patton's statement. Are there any questions? Mr. McIntire?

Mr. MCINTIRE. I have just one question, Mr. Chairman.

I should like to get your opinion, Mr. McDonald, on this question. We have the two basic views of conservation at the farm level; one the Soil Conservation Service program and the other the agricultural conservation program. If I remember correctly, the appropriation last year was $60 million to the Soil Conservation Service and $250 million to the agricultural conservation program. In your opinion which is the greatest return on the dollar, of those two programs? Do we get any better return on the $60 million in the program of the Soil Conservation Service, as contrasted with the $250 million in the agricultural conservation program, in actually keeping the soil on the farms, where it is as of today?

Mr. MCDONALD. I would say that the agricultural conservation program complements the work of the Soil Conservation Service, which primarily provides technical assistance and know-how, rather than funds and materials and so forth to do the job. As to which dollar is the best spent, I do not know.

Mr. MCINTIRE. Would you have any opinion as to which is the best dollar from the standpoint of saving the soil on the farm?

Mr. MCDONALD. Well, the inference is we might abolish one and leave the other.

Mr. MCINTIRE. There is no inference. I am just asking which is the best use of money. If you had a given amount of money, on the basis of the two programs as they have been operated and as they might well expect to be operated, which is the best use of a given amount of dollars for saving the soil on the farm? Is it the $60

million Soil Conservation Service or the $250 million in the agricultural conservation program?

I know they supplement each other, but it is not a case of supplementing. It is rather a case of deciding which is the best use of the money?

Mr. McDONALD. I am really not qualified to speak objectively. I happen to have come into the Soil Erosion Service in 1935. I worked with the Soil Conservation Service until September 1942. I was intimately associated with a great deal of their work. I worked closely with Mr. Bennett over a period of several years.

I do not have any intimate knowledge of the agricultural conservation program, except that I have participated in it to a very small extent as a farmer.

I hope my answer will not be interpreted as suggesting that there should be any reduction in agricultural conservation program funds; but, trying to honestly answer your question, I would say Soil Conservation Service is more important.

Mr. McINTIRE. Thank you.

Mr. ALBERT. Mr. Chairman?

The CHAIRMAN. Mr. Albert.

Mr. ALBERT. It is you feeling that there should not be any curtailment of either program; or any substantial curtailment? You think we have a full need for the two programs substantially as they have been operating over the past few years?

Mr. McDONALD. That is correct.

Mr. LOVRE. Mr. Chairman.

The CHAIRMAN. Mr. Lovre.

Mr. LOVRE. I am in complete accord with you with reference to watershed treatment. I think definitely more time and money should be spent on our watersheds, because that is where floods begin. But I noticed you were critical of some of the projects of the Corps of Engineers.

Now, with reference to the Missouri River construction program, as I understand it, your organization is for that?

Mr. McDONALD. You mean the program?

Mr. LOVRE. I notice on page 5 of your statement you state:

> We do not suggest the curtailment or elimination of any existing programs.

We have, as you are undoubtedly familiar with, the development of the Missouri River Basin under the Corps of Engineers. We have a number of large dams which are now being erected. It is my understanding that your organization is in favor of the completion of that project; or are you not qualified to answer that question?

Mr. McDONALD. I am afraid I am not. My remarks about the Army engineers implied that they have no program. They just go out and build a dam. When we suggest that there be no curtailment of the program, we do not mean that you should not review these things pretty carefully and perhaps change your plans in accordance with the facts developed by surveys, and so forth. We certainly favor, as you well know, the development of the Missouri Valley.

Mr. LOVRE. I just want to call your attention to the fact that the Farmers Union in South Dakota is particularly interested in the development and continuation of the construction program of Fort Randall, Oahe, and Gavin's Point. Those projects are now being

discussed quite thoroughly and quite widely, and the farm organizations out in that area have voiced approval of those projects.

Mr. HOEVEN. Will the gentleman yield?

Mr. LOVRE. Yes.

Mr. HOEVEN. As I understand it, the gentleman from South Dakota is trying to find out whether the Farmers Union supports the Pick-Sloan plan for the Missouri Basin, or whether it supports a Missouri Valley authority; is that right?

Mr. LOVRE. What I am trying to find out is whether the Farmers Union is in favor of completion of the program which was authorized in 1944, which is a construction program known as the Pick-Sloan plan.

Mr. HOEVEN. Yes. That is what I wanted clarified.

Mr. LOVRE. With reference to financial assitance to those farmers who are willing to practice land-improvement measures, what is the stand of your organization?

Mr. MCDONALD. Well, we favor the continuance of the program as administered in the past, at least.

Mr. LOVRE. I have introduced a bill, which you are undoubtedly aware of, liberalizing credit for those farmers who are willing to engage in improved-land practices. I am wondering if you have given any thought or study to that particular bill.

Mr. MCDONALD. I believe, Mr. Congressman, we have endorsed that legislation, although I am not too familiar with it.

Mr. LOVRE. That is all.

The CHAIRMAN. Are there any further questions?

I take it, Mr. McDonald, from what you have said in this statement, although I am not sure it is said in exactly this form, that you favor beginning any program, dealing with floods, right back on the land. You believe in flood prevention as far as that can be accomplished in order that the problem of flood control may be lessened. Is that the inference we are entitled to draw from your statement?

Mr. MCDONALD. Yes, sir.

The CHAIRMAN. You believe that watershed programs in other words, should come first, so far as dealing with floods is concerned?

Mr. MCDONALD. Yes, sir. You are putting the cart before the horse when you start at the mouth of the river on the large streams, it seems to us.

The CHAIRMAN. Of course, we have been following that method.

Mr. MCDONALD. There are all kinds of problems which Mr. Patton did not go into. Sedimentation is one. I understand many of the dams are filling up very rapidly. This, of course, is due to soil erosion. If we can lessen soil erosion, then we will partially solve, at least, the problem of sedimentation.

The CHAIRMAN. There will always be some question, will there not, as to just how much we need in the way of flood-control structures in the main river channels, until we know how much we can accomplish by flood prevention through watershed programs in the upper reaches of the smaller tributaries.

Mr. MCDONALD. Yes, sir.

The CHAIRMAN. You agree with that?

Mr. MCDONALD. I would. I would say that I do not think we will ever eliminate floods. The records indicate that there were floods when the Indians were here, before this country was settled, but they

were very rare. I do think the evidence indicates that we have brought about an increase in floods by destroying vegetation which holds the water on the land.

The CHAIRMAN. Yes. Well, I do not want anything I have said to indicate that I believe that we can control all floods or prevent all floods without building large structures on the main streams in some cases. I think they have their place, although I am sure they have been overemphasized in recent years and have been constructed without giving due consideration to what might have been accomplished by watershed programs farther upstream.

Mr. LOVRE. Mr. Chairman.

The CHAIRMAN. Mr. Lovre.

Mr. LOVRE. Is it not true that one program implements the other? We need both programs. We need the watershed program and we also need the program on the main streams.

Mr. MCDONALD. That is correct. You need programs for other purposes too, such as power. The large dams furnish power and water for irrigation, and I think the navigation aspect certainly has a place in the programs. We favor consideration of all factors in developing the resources in the best way possible for all of these things.

Mr. LOVRE. Your criticism was just to the fact that perhaps the program of the Corps of Engineers has developed faster than the watershed program, and more emphasis should be put on watersheds at the present time; but that both of them should be continued?

Mr. MCDONALD. Well, our attention has been called to the fact—I think everyone knows this—that there has been intense competition between two great agencies on projects. The result has been very bad all the way around.

Mr. HARVEY. Will the gentleman yield?

Mr. LOVRE. Yes.

Mr. HARVEY. I think possibly the answer to the problem lies within your own statement. I think the gentleman from South Dakota will agree with me that the problem has been accentuated because we have not had proper coordination between the various agencies engaged in trying to solve the problem. That is the gist of your observation with respect to the various agencies, is it not?

Mr. MCDONALD. Yes, sir. Not only do you need coordination between the Army engineers and the Bureau of Reclamation programs, but the Department of Agriculture, also. That is even more important, as you do not really get to the root of the matter until the Department has under its jurisdiction the protection of soil on the farms.

Mr. HARVEY. They all have a place, but their efforts should be coordinated instead of competitive.

Mr. MCDONALD. Yes, sir.

The CHAIRMAN. Mr. Harrison had a question.

Mr. HARRISON. I wanted to ask this, in addition to what Mr. Harvey has said on the matter of coordination. From what you have said, also, I was not sure from your statement as to whether or not you favor the Pick-Sloan plan. I just wanted to ask this question: Whether or not you would feel as though the Pick-Sloan plan, up in the position it is, is an application of controlling the water upstream. If the Pick-Sloan plan works as we think and hope it will, and controls the water at the headwaters, before it gets down to Nebraska, Iowa,

Missouri, and Kansas, it will thus prevent floods. We are of the opinion that if the water is taken care of there, we will not have the floods such as we had last spring. That is an application of upstream control. That water comes mostly from the mountains, and we must control it up there in order to save our people downstream.

However, I agree with you in what you say on page 3 of your statement, that when you build some of these big structures to control the floods downstream they spread out over the territory, such as the floods we had in the area of Iowa and Nebraksa last year, where they were trying to save Omaha. They saved Omaha all right, but they flooded a great many farms upstream when they were trying to control the flood. From that viewpoint would you not say that this Pick-Sloan plan, where it is being developed, has a very definite place?

Mr. McDONALD. Well, we are on record as being against the plan. I believe we have appeared several times in connection with various committees and expressed our views officially that the plan in general was a bad plan. I think the situation has developed to the point—and I am not too familiar with these matters—that you will have various projects or various dams being built where work has been started and has progressed. While we were in general against the whole plan of dividing up all the work between these two agencies, we do favor specific dams being built where they are being built, particularly as they are near the headwaters.

I do not believe that that is the answer, though, to flood control in the Mississippi Valley. I think it does lie back still farther there on the farms and in the soil; in other words, where the rain naturally falls. These dams will probably lessen the floods.

Mr. HARRISON. In this particular instance it seems as though the water which causes the floods, or which caused them at that time, came from the melting of snow up in the mountains. It was not water that originated on the farm and got down into the streams from the smaller streams. Most of it came at that time of the year from the melting snows in the mountains. Thus we have the June rise in the flood that we had last spring, rather than coming from the rains which fall on the farms which you and I are familiar with. From that standpoint I just wondered if you would not agree with me that that is an application of the upstream control.

Mr. McDONALD. Well, we would be in favor of that type of control. My impression is that particularly in the lower valley the floods have been preceded by a long period of precipitation, with very heavy general rainfall which covers thousands of square miles.

Mr. HARRISON. Yes. I am very familiar with that type of flood.

Mr. McDONALD. That water comes first in the small tributaries and then in the larger ones. Finally it gets on down to the mainstream and there is where you have your flood. That was the situation we were thinking of when we composed this statement.

Mr. HARRISON. It occurs to me that there is a place for both of them, if we can just cut out that place for each of them.

Mr. McDONALD. Yes, sir; I think so.

Mr. HARRISON. That is all, Mr. Chairman.

The CHAIRMAN. Mr. McIntire, did you have a question?

Mr. McINTIRE. Just one. I was wondering what your thought would be, or the thought of your organization would be, relative to the possibility of our overemphasizing the national interest in the

erosion problem and the possiblilty of our underevaluating the progress which has already been made; and whether or not we possibly should be concerned as to a philosophy of trying to buy time by just simply appropriating money for programs.

Mr. McDONALD. Well, I believe you were here when I indicated my prejudice in favor of the Soil Conservation Service. I certainly would not be in favor of any program which would merely hand out money, with no technical assistance, no supervision, no farm plan, no planning on the land use on the farm, and all that goes with a conservation program.

I think, Mr. Congressman, that the giving of money by the Federal Government possibly has been overemphasized. It is forgotten that usually the farmer spends three or four times as much as he gets from the Government.

I received last year on my farm $4.12 for lime. I believe the total cost was around $8 or $9. In other words, the Government paid half or almost half. I do not think you could point to any other soil practice in which the Government would pay as high a part. Of course, I had to put the lime on myself, and there were various other costs in connection with liming the soil, in addition to the money which I spent for the lime itself.

Generally the small payment made by the Government is merely an incentive. It is educational to some extent. We think that the ACP program has worked out very well. No doubt there has been money wasted, but generally we think it has been money well spent.

Mr. McINTIRE. I have just one other question. How much lime would you have used if there had been no payment?

Mr. McDONALD. I would have probably used the same amount.

Mr. McINTIRE. The same amount.

Mr. HARRISON. Will the gentleman yield there?

Mr. McINTIRE. I am all through.

Mr. HARRISON. I just wonder how long, in your opinion, the farmer should receive this incentive payment before his education is completed.

Mr. McDONALD. I am sorry?

Mr. HARRISON. I say, I just wonder how long you would suggest that we give this incentive payment to the farmer before he is completely educated, or before he has graduated from this course and has a certificate.

Mr. McDONALD. Well, I do not know. I would say this, Mr. Congressman: The farmer is in a worse economic condition now than he has been in many, many years. Farm net income has declined about one-third, or almost one-third, since 1947. The history of prices of the last year or so, I think, has been developed by this committee and other committees.

Farmers need these payments now, certainly. As to how long they would need them, I do not know.

Mr. LOVRE. I wonder if my colleague would yield to me right there.

I wonder if you do not agree with me that there will be need for conservation practices so long as this world of ours exists? We will never reach the point where we have finished the job completely. Conservation is so vital for the preservation of our soil that so long as this world is in existence we will have to continue with conservation practices in one form or another.

Mr. HARRISON. I agree with that wholeheartedly. In answer to that, and in answer to my own question, to use a personal example, I have, through some of these practices, increased the income on my farm since 1945 almost double. That is not true in just 1 year; it was true last year.

I cannot quite agree with the statement that our income is down, in my particular case, because I have practiced some of these practices which we have been talking about, and my income is up. I have been using fertilizer and I have been plowing under green manure and terracing, and so forth. As a consequence I think I have become completely educated to the place where I do not think that the Government should be paying me for the things I know how to do and should do in order to increase my production.

Mr. MCDONALD. Well, we should remember that no farmer is forced to take this money.

Mr. HARRISON. What is that?

Mr. MCDONALD. No one is forced to take the payment. Now, actually, I bought a good deal of lime and I put in clover and grass and that sort of thing, and I got nothing for it. I did not ask for it.

Mr. HARRISON. Yes.

Mr. MCDONALD. It has been suggested that perhaps only farmers should get payments who need them, but that would involve the problem of deciding. We feel that the best thing to do is to give everyone a small payment, regardless of his economic position, if he comes forward and asks for it.

I do think the farmers could be urged not to. If they feel that it is a bad thing for them to take money from the Government, then they should be told they certainly should not take it if they do not need it.

Mr. HARRISON. Well, I am of the opinion that it was a good thing and it is a good thing as an incentive payment to get the thing started. However, I feel as though there is a graduation point.

Mr. ALBERT. Will you yield there?

Mr. HARRISON. Yes.

Mr. ALBERT. You may have doubled your income, but from all of the data we have had from the BAE and others farm income is down. If you grew corn in a supported area, I do not know what you grew, but if you did, you probably were able by increased production to continue to increase your income. At the same time in the western part of your State the income of the cattlemen is going down fast. Pasture improvement and that sort of thing are just as necessary as ever, and in some cases more necessary, due to droughts and difficulties caused by weather and other things. We have to approach the problem, it seems to me, from the national standpoint and not from the standpoint of economic conditions in a particular area.

If we base this on need, we are making a relief program out of it instead of a conservation program. After all, what we are trying to do is to save the soil. If a man is well off and owns 10,000 acres of delta land, still the conservation of that soil, under the philosophy of the ACP payment, as I understand it, is a national matter in which the Federal Government is justified in investing some Federal funds.

Do you agree with that generally, Mr. McDonald?

Mr. MCDONALD. Yes, sir; I certainly do.

Mr. HARRISON. Well, I quite agree with that, too, and I want to be on record as being in favor of conservation. I am wholly in favor of it. However, when I am being given an opportunity and taking advantage of the opportunity to participate, I find that it is profitable for me to participate. Then there should be a place, I think, where the Government should quit paying me to educate me, when I already know these things. As I say, in this particular instance I have increased my production.

Now, in answer to the statistics that we get relative to the income of the farmers, I think that would be influenced quite largely by the income of the cattlemen. That is the one segment of our agriculture today which is down. However, in my particular area, why, other segments I think are up. The hog prices are up to better than they have been for some time. The corn price is stable and it is a ceiling price. The price has not fluctuated at all so far as the corn prices are concerned. Other prices are the same way. In our area, outside of the cattle industry, they are in good shape, I would say.

Mr. MCDONALD. I think the explanation of declining farm income lies in increased costs. Actually, I do not remember the gross income, but I think it has not declined too much, or varied too much, in the last few years, since the exceptionally good year in 1947. I think it has been around $32 billion, $33 billion, or possibly $34 billion gross. But if you will look at the figures on net income for those years since 1947 you will see a steady decline at the same time the income of working people was going up and the income of business was going up. During that period, too, the dollar has been declining in value. So the farmer actually has been getting a lesser number of dollars net which were worth only about 50 percent, I believe, of what they were worth in 1939.

The CHAIRMAN. Are there any further questions?

Mr. HARRISON. I have no further questions.

Mr. MCDONALD. I think the farmer, Mr. Chairman, is really a disadvantaged segment of our economy or economic system at this time.

The CHAIRMAN. Mr. Poage.

Mr. POAGE. Mr. McDonald, yesterday we had testimony from a representative of a nonfarming group that it was his opinion that any soil conserving practice which could not be shown to pay a profit to the farmer was not a sound practice, with the corollary that therefore all soil conservation costs should be borne by the farmer himself. Do you accept that philosophy?

Mr. MCDONALD. Not at all. I do not think it should be based on that sort of thing. I think everyone has a stake in the soil, whether he lives on the farm or not.

Mr. POAGE. Do you agree that the people in the big cities who are dependent upon a water supply stored in reservoirs, many of which are filling up with mud very rapidly, because of poor soil-conservation practices, have a stake in soil conservation just the same as the man from whose farm that silt came?

Mr. MCDONALD. Yes, sir.

Mr. POAGE. Do you agree that that man should contribute something, some share of the cost of that conservation, just the same as the man from whose farm the silt came?

Mr. MCDONALD. Yes, sir.

The CHAIRMAN. We thank you very much, Mr. McDonald, for your statement and for your appearance before the committee.

Mr. MCDONALD. Thank, you, Mr. Chairman.

The CHAIRMAN. We will next hear from Mr. John C. Lynn, representing the American Farm Bureau Federation.

STATEMENT OF JOHN C. LYNN, LEGISLATIVE DIRECTOR, AMERICAN FARM BUREAU FEDERATION

Mr. LYNN. Mr. Chairman, my name is John C. Lynn, legislative director of the American Farm Bureau Federation. The subject of the presentation we would like to make this morning is entitled "Wise Use of Land Resources."

It is our purpose at these hearings to set forth the general policies of the American Farm Bureau Federation with respect to (1) the wise use and the improvement in the use of our land and water resources, (2) the need for a comprehensive review of existing programs and activities of the Federal Government in this field, (3) the desirability of analysis and correlation of the organization and administration of such endeavors before undertaking to initiate new programs and activities, and (4) the need for careful consideration of the principle of decentralizing responsibility for such programs to the States.

Our 1953 resolution on natural resources adopted by the official voting delegates of the member State farm bureaus provides as follows:

> It is a sacred obligation of this generation to conserve our natural resources for future generations and to accomplish wise use and development of these resources so as to make the maximum contribution to our national welfare.
>
> Basically, and particularly so with respect to soil conservation, this objective must be the primary responsibility of farmers who want to do the job because they recognize that conservation farming is sound economics and because they accept their responsibility as stewards of an irreplaceable natural resource. Adequate farm income is the best assurance of the assumption of this responsibility by farmers.
>
> Government has a vital supplementary role in accomplishing conservation. The most important role of government is research and education. Increased emphasis is needed in our educational institutions on the importance to national welfare of conservation of all resources and upon ways and means by which this can be accomplished. Research in this field is needed, not so much as a separate project, but as part of a balanced program of sound farm management. The national interest in preserving our natural resources justifies a measure of State and Federal expenditure. The administration of all such programs should be decentralized.

This general policy was supplemented by a section of our agricultural policy as follows:

> The maintenance and improvement of our soil, water, and forest resources through proper use must be an integral part of any permanent farm program. This is of vital importance, not only to agriculture but also to the entire nation; however, the ultimate responsibility for wise soil management rests with those who farm the land. Farmers everywhere have a growing realization of their responsibility for the protection of our soil and water resources. The encouragement of wise farming practices through education and demonstration is a sound public investment.
>
> As provided in our resolution on economic policies, it is our firm conviction that a reduction in Federal expenditures for less essential Government activities is imperative to prevent inflation and preserve our free enterprise system. Agriculture should bear its fair share of such reductions. The necessity for essential research and service activities makes an across-the-board reduction impractical and necessitates a relatively heavy reduction in direct payments to farmers.

Appropriated funds for the agricultural conservation program should be allocated on the basis of conservation needs. Payments for practices which have become a normal and accepted part of farming operations of the area in which a farm is located should be discontinued. Payments due individuals should not be increased after practices have been performed as has sometimes been done to use up available funds. Unused funds should be returned to the Treasury without penalty to the county in the next year's allocations.

We urge that the American Farm Bureau Federation Board of Directors give careful study to the possibility of substituting a program of long-term, low-interest rate loans for the present ACP payment program. This study should include the possibility of reducing or postponing the loan repayments that fall due in years of low farm prices.

We wish to make it clear that the American Farm Bureau Federation is for programs and activities designed to aid farmers in accomplishing the most efficient and wise use of their land and water resources. Most of this job must be done by farmers. Government has an important supporting role. Particularly, we favor educational activities and the preservation and strengthening of the soil conservation districts. One of the important problems in agriculture is the problem of efficient and conservative use of our land and water resources. There is no disagreement anywhere on the need for further progress in this field.

The American Farm Bureau Federation has had misgivings with respect to the large expenditures being made for the construction of large main stem dams for flood control purposes. It is our firm belief that this is not the whole answer to the problem of flood control. It is our feeling that national policy has failed to give adequate consideraton to the contribution that upstream dams, small projects, and watershed treatment might make to flood prevention. A smaller amount of money spent for such purposes may be more effective than a large amount spent for major main stem dams. Furthermore, unless adequate consideration is given to the problem of holding the soil and water on the hillsides, the flood control structures are likely to become filled with silt and therefore to be of only temporary value.

We hasten to add that we know of no adequate engineering studies which demonstrate the relative contribution that main stem flood control measures, on the one hand, and upstream flood prevention measures, on the other, can make toward minimizing flood damage. We would like to see such studies undertaken.

A recent report of the Army Civil Functions Subcommittee of the House Appropriations Committee appears to bear out our concern relative to the effectiveness of large dams as a flood control measure. The subcommittee reached the conclusion that despite the expenditure of over one quarter billion dollars on channel stabilization and navigation improvement on the lower Missouri River "it appears that the Corps' work has actually increased floods on the river, year after year."

To summarize our viewpoint on this problem, therefore, we believe that here is a field relating to land and water utilization which has been neglected by national policy and to which this committee might well give detailed consideration.

However, before hastening into any program designed to alleviate this situation, we believe there needs to be a thorough investigation of some issues closely related to this and other programs in the field of land and water utilization.

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The first of these related issues is that of multiplicity of program and duplication of government agencies. The following programs and activities are currently in operation in the field of improving our use of land and water resources:

1. The research and educational activities of the land-grant colleges and the State extension services.

2. The research and promotional programs of the Soil Conservation Service and the technical services provided by such Service to the autonomous soil-conservation districts established under State law.

3. The agricultural-conservation-payments program operated through the State and county units of the Production and Marketing Administration.

4. The flood-control programs authorized by the Flood Control Act of 1936, as amended, which are currently administered by the United States Forest Service and the Soil Conservation Service.

5. The Water Facilities Act administered by the Farmers Home Administration.

6. In many States there is a division of natural resources or comparable department which has some responsibilities relating to the use of our land and water resources.

7. The above-listed programs apply primarily to private lands. In addition we have the various programs relating to the use of public-land resources administered by the Forest Service, the Soil Conservation Service, the Bureau of Land Management, and other agencies.

The second consideration that we believe needs to be studied is the desirability of decentralization of administration.

The American Farm Bureau Federation has supported for many years the policy that to the maximum feasible extent the administration of national programs and activities should be decentralized and localized by the delegation to State governments of the responsibility for the administration of such programs and activities.

We submit that this technique for administering national programs is one of the most successful mechanisms of government yet developed. It has been used for many purposes, the agricultural extension and research programs, the national highway program, the water pollution program, the school lunch program, the agricultural news service, many of the regulatory disease control programs, farm product grading programs, the employment service program, the hospital construction program, the unemployment insurance program and others. It is a technique of government that has been successful.

This technique for administering national programs has been successful because it gets responsible government closer to the people it serves. The decentralized agricultural extension program and State experiment stations have, for example, been successful because they are tuned to the people, because they are aimed at the problem of people from their viewpoint, rather than from some faraway viewpoint. They are responsive to local needs and desires. They get at the problem where the problem is. They build responsible self-government. They give local people an opportunity to participate in government. This system of agricultural education and research is the envy of the world. Delegations from other countries are in the United States continuously to find out how it is done.

This problem is closely related to the kind of government we are going to have in the United States. We submit that one of the fundamental, overriding principles in which we are all interested is the maintenance of responsible, strong, independent State and local units of government. If this is to be accomplished it is imperative that we leave with, or delegate to the States, the responsibility for administering those programs which they can administer more effectively than the Federal Government. It may be that some broad general standards need to be established in connection with the delegation of authority but these should be kept to a minimum. We have confidence that the people of the respective States are competent and capable of working out operating procedures and principles that will be in accord with the general interest.

There is another type of decentralization that is occasionally referred to; the decentralization of Federal agencies by delegation of responsibility to local, State or regional offices. Alternatively, it is proposed that Federal agencies be set up to deal directly with counties, municipalities, and other local units which are given some measure of local control.

However, these types of decentralization are often more apparent than real. The strings of authority still remain in Washington.

In our opinion, by far the most desirable type of decentralization is that which delegates responsibility to the States. Programs which bypass State governments to deal directly with local people or with local units of government or with local institutions tend to weaken State governments in comparison with the Federal Government. The circumstances of our time have resulted in, often compelled, the centralization in the Federal Government of power and authority which would have shocked us only a few generations ago. The technique of decentralizing responsibility for administration of national programs to State governments where feasible is an important measure for offsetting this trend toward centralization of power and authority.

The grant-in-aid principle was originally set forth in the Soil Conservation and Domestic Allotment Act. This act provided that the Federal Government should administer the agricultural conservation payment program for a limited period, but that as State governments enacted legislation to take over this responsibility the program should be converted over to a grant-in-aid basis.

Farm Bureau favored this principle in 1936. We still favor this principle. We favor it not only for the agricultural conservation payment program but for other national programs in the field of land and water development and use as well.

We do not believe there is any greater contribution that this committee could make to this important issue than the adoption of this time-tested technique of government to our national programs for preservation, improvement, and wise use of our soil and water resources. It is our conviction that delegation of this authority for administration of programs designed to aid farmers to improve their use of these resources would be a measure which would result in more effective accomplishment of this objective and the most efficient expenditure of appropriations for such purposes.

It is submitted that the enactment of legislation to accomplish this would be consistent with basic traditions of both our great political parties and would represent a milestone of progress toward responsible

self-government and the preservation of State rights and responsibilities.

We sincerely believe that no new or additional programs should be instituted in this field until progress has been made toward correlation and decentralization of the administration of programs designed to aid in the conservation and use of our land and water resources.

We believe the committee should be commended for the broad look they are taking at this problem. We appreciate the opportunity of presenting our viewpoints on this important issue. If there is anything the American Farm Bureau Federation can do to facilitate your further investigation of this issue, we will welcome the opportunity of doing so.

The CHAIRMAN. We thank you very much, Mr. Lynn.

Are there any questions?

Mr. HARVEY. Mr. Lynn, I note the general theme of your recommendations for administering programs of soil conservation in the furure is along the line of a Federal-aid principle.

Now, it has been my observation through many years that this very principle of Federal aid has been under a great deal of fire. People are complaining about the Federal-aid programs and resisting the expansion of the so-called Federal-aid pograms.

Mr. LYNN. I think it is more accurate to say that our program is for Federal grant-in-aid programs, where the responsibility is given to the States to administer.

Mr. HARVEY. Suppose that we just take another subject that is a little aside from this so that we can discuss it a little more objectively. That is the Federal roads program. As you well know, there has been a great deal of agitation on the part of the States themselves that the Federal Government should get out of the program entirely. We continually hear the squawk, and I just use that as an illustration of the problem that not only faces this committee, but the whole Congress with regard to an extension of this principle.

Mr. LYNN. Sir, I think there is a divided opinion with regard to this principle. It has been the philosophy of the American Farm Bureau for years, and still is, that we believe that insofar as possible—and we recognize there are some programs that must be administered by the Federal Government—the States should be allowed to do the job because the States could do just as good a job, or a better one, using the available funds in getting the program down to the needs of the people, and we are for that program. I think a good example of that, sir, is the agricultural-conservation-payments program.

The Congress, in enacting the Soil Conservation Domestic Allotment Act in 1936, provided for such decentralization and put it on a grant-in-aid basis with the States. I would like to ask, with your permission, for Mr. Triggs to supplement my testimony.

STATEMENT OF MATT TRIGGS, ASSISTANT LEGISLATIVE DIRECTOR, AMERICAN FARM BUREAU FEDERATION

Mr. TRIGGS. In answer to Mr. Harvey's question, I think that you would agree with me, Mr. Harvey, it has been far wiser in the administration of the Federal appropriation for roads for the Federal Government to grant that money to the States, and to permit the States to spend it within certain standards, far wiser to do that than for the

Federal Government to have gone into the States and to have built certain of the roads. That is the distinction that we are trying to make here.

Mr. HARVEY. I would agree with you. I think there is no doubt the principle back of the program has been sound. In bringing out the roads program, I was not attempting to discredit; I was simply bringing your attention to the fact that there have grown up, and in many instances without a thorough understanding of why the Congress has attempted to accomplish certain goals through that process, distinct signs of resistance. I am sure any attempt to further expand the program, regardless of its merits, would meet with a great deal of opposition simply because the complaint would be made—well, this is just another one of those Federal programs that we are going to try to get rid of.

Mr. TRIGGS. Even a Federal-aid program might be carried to extremes, and I am not saying the highway program has or has not been carried to extremes.

Mr. ANDRESEN. In the road program involving Federal aid the Bureau of Roads deals with the State highway departments, and the State highway departments have to follow the specifications and the regulations laid down by the Bureau of Roads.

With reference to these payments that you proposed, or grants to States, would you set up the State departments of agriculture to disburse the funds according to the specifications?

Mr. LYNN. We are studying this problem now, and we have not come to any conclusion as to who. We would basically leave it entirely up to the States. I think the States would do it differently. Some States would center it around the commissioner of agriculture; some the land-grant colleges. We are not prepared to make a recommendation on that. We would be perfectly willing to leave it to the States to decide who would do it.

Mr. ANDRESEN. You mentioned land-grant colleges. Would you leave it to the Extension Service in the States to handle the program?

Mr. LYNN. We have not determined policy on that, sir.

Mr. TRIGGS. We certainly would not be prepared to recommend that it should go to the Extension Service because in many States the Extension Services do not want to take responsibility for the administration of action programs, and in other States perhaps they do. I think the people of the States have various opinions on that question, and we would certainly think they ought to have something to say about it.

Mr. ANDRESEN. I know the Farm Bureau has a very definite opinion on the activities of the Extension Service. I know in Minnesota, in the legislative session, a bill was introduced and, I believe, passed, divorcing the Farm Bureau from the Extension Service. That has been quite contrary, as I understand it, to what the Farm Bureau has stood for.

Mr. LYNN. It is not. On the other hand, we have encouraged the State. However, our objection has been, sir, referring again to the so-called Granger bill, which is before this committee, which we opposed, we were opposed to the Federal Congress deciding this issue. We were for the States deciding it, and we are very happy that this has taken place in Minnesota. It has also taken place in Kansas. It has taken place in West Virginia this year, but we want the States to determine that in the State legislatures.

Mr. HOEVEN. Mr. Lynn, I am just wondering what the American Farm Bureau is doing to instill more interest on the part of the States in the very thing you present here this morning. The State of Iowa is a great agricultural State and rather a wealthy State. We believe in soil conservation. I do not know of any unusual effort being made to impress the Iowa General Assembly that they should appropriate more money for soil conservation. I am just wondering what the American Farm Bureau and other farm agencies or organizations are doing to try to instill more interest on the part of the States themselves.

Mr. LYNN. I think, Mr. Hoeven, the resolution I quoted here is a consensus of opinion of the States. Now, the degree of activity of the State farm bureaus in this regard varies from State to State, but I do think that the State farm bureaus are becoming more and more conscious of this problem and I am sure that a lot of them are taking action in this regard.

If you have referrence, sir, to the State legislatures passing enabling legislation to take over ACP, I think at one time there were some 36 States that had this legislation. Some of it had a termination date on it, and I believe that our latest count indicates 26 states still have on the statute books legislation providing for the taking over of this responsibility.

Mr. HOEVEN. You realize, as I do, that practically every State in the Union is better fixed financially that the Federal Government. I maintain that a little more activity on the part of the States themselves and the farm organizations to instill that interest would bring about greater cooperation and lessen the burden on the Federal Government.

Mr. LYNN. That is right, sir.

Mr. POAGE. I concur in what Mr. Hoeven has said and I think he is right. We must emphasize the importance of the States doing something. It would seem to me that there is much merit in trying to place responsibility in the States.

As you recall, I introduced a bill, and Mr. Hope and Mr. Curtis have introduced similar bills, relating to upstream flood prevention, that tries to place the responsibility locally; tries to bring back responsibility to do, as I understand, substantially what you are suggesting. I would not want to see us embark upon a program of turning over either our Soil Conservation Service or our ACP, or any other programs to the States unless and until we know the States are going to handle it efficiently, or at least know that they have some plan to handle it.

You say that there are 26 States that have laws to handle ACP payments?

On what sort of basis are those laws passed? Who will handle them?

Mr. LYNN. I brought along with me the law of Mississippi, and the reason that I have this one is we thought the Mississippi law, and then the program for implementing that law, was very well done. It was done most recently in the calendar year 1953. I may say, sir, this has been forwarded by Mississippi to the Department of Agriculture. We have circulated this act and plan to our State farm bureaus as an example of how this thing might be approached.

Mr. POAGE. I think that is exactly the kind of thing we ought to be doing, to see that these people in the States are getting some kind of plan laid out before them.

Mr. LYNN. I would agree certainly that we have a definite responsibility in this as farm organization representatives, and I doubt if we have done as much as we should have done in this regard.

Mr. POAGE. Would you go this far in agreeing with me: I do not know whether you would or not, saying that you ought not transfer these funds to the States until we have pretty sound assurance that the States have a practical means of handling them?

Mr. LYNN. I would agree, sir, but I also believe if the Congress would state again its desire with regard to this matter that the States would be more enthusiastic about getting these laws through and their plans developed because it is my sincere feeling that the States, generally speaking, have taken this too lightly. It is definitely a part of the basic act in dealing with this subject.

Mr. POAGE. Let me ask you another question: I think we all recognize that there is going to be a very serious effort to reduce the ACP payments substantially. I understand the Farm Bureau suggests about $150 million.

Mr. LYNN. $111 million.

Mr. POAGE. You mean a cutoff of last year's appropriation of $111 million. I referred to the amount of the suggested appropriation. There are other people who feel that they should not be cut. Some feel that they should not be cut at all. Some feel that they should be cut but not that much. There are all kinds of variations of opinion as to what amount we should have for this progrm.

Would you feel it would probably be wise for the Government to make somewhat less cut than you have suggested if that money could be handled directly by the States in the form of grants-in-aid?

Mr. LYNN. It might change our attitude toward this if that were true. However, Mr. Poage, we sincerely believe that if these payments are made to the States and to the county and to the areas on the basis of need, on a decentralized basis, that the people will soon discover again whether or not they should be increased or decreased. We believe this decentralization at the level at which we have recommended would be sound, and then as these States develop their plans there might be a need for more money and it could be demonstrated that it would be used wisely.

Mr. POAGE. When you say "demonstrated on the basis of need," do you mean on the same basis as we are distributing now? I do not mean they are distributed to the State governments, but the funds are distributed through PMA by the State offices. They are broken down so much for Texas, so much for Oklahoma, and so much for Minnesota, according to a formula. Is it a formula somewhat similar to the present formula that you have in mind?

Mr. LYNN. No, sir.

Mr. POAGE. Do you contemplate the poorest States would get the most money?

Mr. LYNN. No, sir. Let me give you an example of what I mean, if you will pardon me for using a State. I will use the State of Illinois. There is no one here from Illinois, and I will be safe in using it.

The State of Illinois gets more ACP payments than any other State in the Union, some $12 million last year. If you will analyze where the payments are going in the State of Illinois you will find that primarily they are going to the heart of the Corn Belt. The 30 southern counties of Illinois are getting far less than the heart of the Corn Belt.

Now, in the State of Illinois 40 percent of the farmers participate

in the program and 82 percent of the money paid out in Illinois is for inorganic fertilizer material, 82 percent of about $12 million.

Taking Champaign County as an example—and the reason I take it is that we have investigated this proposition out there—you will find that it has been determined that the application of limestone is the thing to be done. The college says it pays 16 to 1 against land not limed. Banks will loan money to farmers to lime their land, but yet a great part of the money being spent in Illinois in this particular area is going for the payment of limestone.

Now, under our program—and I know this has some disadvantage from a congressional district standpoint—we would say, now, maybe Illinois should get the same amount of money. Let us assume that for the moment. But this money should be spent in the counties and in the areas where the need for soil conservation is the greatest.

Let me give you just one other example.

Mr. POAGE. May I break in right there? I do not see how you reconcile that with the philosophy that you would turn it over to the States to handle it.

Mr. LYNN. I mean if it is turned over to the States on the basis of our policy, it would be administered in the form that I have described. It would be used on the basis of need for soil conservation in the area.

The CHAIRMAN. I assume that the program is being administered in Illinois at the present time because that is what the farmers who participate in the program want. They are making a demand for that type of program.

Out in Kansas I think over 80 percent of the funds are being spent for physical work on the land because the farmers out there want that kind of program.

In some other States they are carrying out some other type of program.

Now, do you think if we turn the money over to the States it will be spent much differently than it is being spent now?

Mr. LYNN. I think so, sir.

The CHAIRMAN. Why do you think so?

Mr. LYNN. I am sure you are aware of how most of this money is paid out. It is paid out usually after a farmer has already carried out the practice, and in many, many counties—I could name one specifically, but I do not need to—the farmers did not participate, did not come in and sign up the worksheets for this money, as somebody thought they should, and again the county committeemen went to each of the farms and said, "Now, look Joe, you have already put some lime on, you have already turned under some crimson clover, you have improved this pasture. We ought to use up this money. Will you not sign this worksheet to get it?"

Now, Mr. Poage, we think that is not the purpose for which the Congress set up this program. We believe that the Congress was wise in setting up this program on the basis of encouraging farmers to do the things they would not ordinarily do.

In a community or county where the application of limes or phosphates is an established practice, all farmers know that it pays to do it, and we see no reason for continuing to repeat that operation on the farm year after year.

The CHAIRMAN. I do not think that is very good administration, whether it is done by the Federal Government or the States. The

mere fact that the State is going to administer it does not seem to me to necessarily give any assurance it is going to be administered any better than it is now being administered by the Federal Government.

Mr. LYNN. We think if you get these programs down to a State responsibility the people will have greater voice in how the program is to be administered, and we sincerely believe it will be done better.

The CHAIRMAN. Let me ask you this: Does your program contemplate that the States are going to contribute funds to this program, or do you mean they are just going to take the Federal money and spend it in the States? I think there is a great deal of difference between a grant-in-aid program where the State has to match and spend its own money and where you simply make a grant-in-aid to the State and say, "Here, go ahead and spend this money; we want you to spend it instead of us."

When the people see that their own money is being spent they are going to take more interest in it, than if it is money that comes from the Federal Government. It seems to me unless you include in your program a provision that the States must put some of their own money in it, you are probably not going to get any better administration than you get if it is all administered by the Federal Government. In many cases I think you will get poorer administration and more waste because if the States are not having to put anything in it and are treating it as money someone else is putting up, I think that it would be administered less efficiently than if it was administered by the Federal agency which has to report directly to the Department here in Washington.

Would you comment on that?

Mr. LYNN. We do not exclude the possibility that this would become a truly grant-in-aid program. I cannot refrain from making one comment on the statement you made, that the people in the State are apt to give better supervision if they know it is their own money. It is their own money irrespective of where it comes from, whether it comes from the Federal Government or the States.

Mr. POAGE. Did you ever serve in a State legislature?

Mr. LYNN. No, sir.

Mr. POAGE. I believe that our chairman has, and I believe he speaks with the wisdom of experience as a State legislator. I served in a State legislature and I do not believe there is one in the United States where the membership is not going to be a little free with the money if it comes from Washington. Theoretically, I am sure you are right, that it is the people's money. I agree with that, but the legislatures of the various States handle money with considerably more freedom than they do the money that comes from the local ad valorem taxes collected from the people of that particular State.

Mr. LYNN. I think that is unfortunate, do you not?

Mr. POAGE. It is unfortunate, but it is just as true as it can be, and it is going to remain true as long as we elect our legislators.

Mr. HARVEY. In furtherance of the very point that our chairman and Mr. Poage have been making, and apropos of the point that you make with regard to the fact that about 82 percent of the funds that went to Illinois went into the better areas, to me that makes sense. I think that is the way that it ought to be. And the same thing could well apply, as far as my own State is concerned, because they

have a great deal of similarity as to the topography. You have the northern area that is inclined to be level and then you have the gradually rolling central section and the unglatiated section in the south.

Now, the southern section, as you well know, Mr. Lynn, is strictly a marginal area. A great deal of it is submarginal. Without regard to personalities, or areas, the objective of our program is a soil conservation one, is it not? That is the defense peg upon which we hang them, soil conservation, not a dole to individual farmers.

The only way you can defend it is on that basis. It seems to me that we could invest our dollars much more wisely in maintaining and improving good land than we could in sinking it into marginal or submarginal land.

In furtherance of the very question that has been raised—and I am a former State legislator myself and have dealt with this problem—I submit to you that if this thing were administered that way I will guarantee the money will go right down in the submarginal areas.

Mr. LYNN. I could comment on what you have to say, but I know that you are pressed for time.

The American Farm Bureau just does not go along with the thesis that the purpose of this ACP money which comes from your authority under the Soil Conservation and Domestic Allotment Act is to encourage farmers to do those practices that would improve their land and hold this land on the hillside.

Now, it seems to me, using your example, that if you do have a submarginal area, that is, eroding severely, and that is true in southern Illinois——

Mr. HARVEY. And southern Indiana.

Mr. LYNN. And southern Indiana, we ought to determine what is the best utilization of that land. There are farmers and people on that land. If it is the best thing to do to put it in trees, then let us encourage those people, through the use of the funds, to put it in trees. If the best use is to strip crop it, let us use some of the money available from the Federal Government to do just that. I cannot subscribe to the idea, and the Farm Bureau does not, that, using Champaign County, Ill., again, with an average yield of corn of some 90 to 100 bushels per acre, those farmers need the payments for the application of lime and phosphate to that land.

Mr. HARVEY. I will say this to the gentleman, in observing Champaign County through the years the mere fact they are getting those yields does not necessarily mean that they are not doing it at a tremendous expense so far as the soil resources of the county are concerned. Actually, I venture to guess if you were to make an analysis of it you would find that the resources of Champaign County, percentage-wise, have gone down much more in recent years than the recources of many of the hilly southern counties of Illinois, so I would not agree with you that your argument hold, and there is not any need for consideration in those areas.

Mr. LYNN. Our information is the other way, sir. It is that the productive value of the land in that country is continuing to increase despite the 100-bushel corn yield because of the proper management and use of their soil resources.

Mr. TRIGGS. There still may be a lot of room for improvement of the management of those farm lands, but it does not necessarily follow

that additional lime paid for by the Federal Government will accomplish that objective.

The CHAIRMAN. To be sure that my own position is not misunderstood, I am not arguing against the proposition we might not get better results if we worked out some plan whereby the money would be disbursed by grants-in-aid to the States. I think it all has to be carefully worked out. My observation has been unless the States are going to spend some of their own money, you stand a very good chance of getting worse rather than better expenditures and use of the money. I just want to make that clear. That is my own feeling in the matter. I am not opposed to the idea of handling it through grants-in-aid to the States under certain conditions.

Mr. LYNN. I think we are generally in accord with what you have just stated.

The CHAIRMAN. I was not sure.

Mr. GRANT. Mr. Chairman, I do not think I have anything more than an observation. Since I asked for recognition you answered the question that I wanted to ask Mr. Lynn, and that was as to any State's contribution. Of course, there would be a contribution by the State in furnishing the personnel and the officials and the administrative officers for administering the act, but it has been spoken of here as a Federal grant-in-aid program. I think this could be said to resemble grants to the welfare departments of the various States which are administered by the States in the main from Federal funds.

Mr. Lynn, you have spoken about some cases of payment. I think you are exactly right, that this program was set up as an educational program, and I do not think that it was ever assumed that payments would be made to the same farmer year after year to carry out the same practices. In fact, it looks to me that through these payments we are trying to help him get more revenue out of his farm, and I think we should meet the challenge and do that through the parity and price support programs.

If we continue these payments year in and year out to a person who knows the use of the practice that the Government is paying for, I think that is the wrong thing. I have had some experience in that. I know in some sections I have heard people say, "What is the Federal Government going to give us this year for soil practice? What is it going to give us for ACP payments? I want to get some of them." Regardless of what it was, they felt they were entitled to it. That is all.

Mr. LOVRE. Mr. Lynn, I listened with interest to your comments on the flood control program under the Corps of Engineers. You do not want to leave the impression that the flood control program of the Corps of Engineers accelerates floods, do you?

Mr. LYNN. Well, I would like for you to draw your own conclusions about that. We are simply quoting from some of your colleagues who made the statement. We thought that it was very significant coming from a committee of Congress. No, sir, we have no information, technically, that would bear that point out that we have discovered for ourselves.

Mr. LOVRE. You recognize the fact that, if it were not for the Garrison Dam, in 1952 the damage in the Missouri River Basin States would have far exceeded the $50 million of damages we did suffer in the 1952 flood.

Mr. LYNN. I know that that was a very bad flood, sir.

Mr. LOVRE. I was very happy to note that you at least give tacit approval to liberalization of credit for the purpose of stimulating better land improvement practices.

Now, my question, Mr. Lynn, is this: Does the Farm Bureau recognize the need for liberalization of credit for that purpose?

Mr. LYNN. Sir, we have under study now, as the voting delegate directed the board to do, that study. I think it is very clear we are thinking of this perhaps as a substitute for the ACP payment program.

Now, we think sincerely that the liberalization of credit for this type of work, there may be some need for it. However, a brief survey we have made—it is not a survey, but the information we have received—in most States, where through the use of these better practices it has been demonstrated they do add to the farmers' income, and if they are the right practices they do, the banks are loaning money to farmers to buy seed for strip cropping to pay for the mechanical use of equipment for terracing and other things.

Mr. LOVRE. That being true, then, would not you be in favor of that program irrespective, if it was a substitute or nor for the ACP program?

Mr. LYNN. Well, we would like to make sure that the credit needs would not be met at the State and local level for this. If it were determined that there was a need for this, we would certainly consider it, that is, in addition to the ACP program. We would consider that at the time.

The CHAIRMAN. As I understand it, your executive board as yet has not considered or reached a conclusion on it. You are not in a position to go further than you have gone in your statement today?

Mr. LYNN. That is right.

The CHAIRMAN. Does your projected study contemplate insured loans as well as direct loans that might be made for this purpose?

The legislation which Mr. Poage and Mr. Lovre introduced covered insured loans.

Mr. LYNN. They cover only the insurance. I think before we reach any conclusion that is pretty well the sentiment of our board of directors; at least, that it is the direction it should take rather than direct loans.

The CHAIRMAN. We thank you very much, Mr. Lynn and Mr. Triggs, for your appearance before the committee.

Next we will hear from Dr. J. T. Sanders, legislative counsel of the National Grange.

Will you come forward, Dr. Sanders?

STATEMENT OF J. T. SANDERS, LEGISLATIVE COUNSEL OF THE NATIONAL GRANGE

Mr. SANDERS. Mr. Chairman and members of the committee, I have a statement here that I will just read.

Lack of speed and inadequacy in conservation, it seems to me, arise out of a misconception of who is benefited and how much or how extensive conservation benefits are. We have looked upon it too much as an individual farmer's concern. We have thought or acted too much as though the farm owner is the only significant beneficiary; that present and not future benefits are the principal returns from con-

servation. Often current benefits accrue from conservation to property off the land to a greater extent than to the farm although in most cases this is not true.

Soil and water conservation is today one of our most urgent agricultural and national domestic problems. For the past 2 or 3 decades we have become especially aware of its importance; and have spent a great deal on it, much of it in an ineffective and wasteful way. In recent years we have realized that as a Nation we have arrived at a stage where we must have a much more comprehensive, more coordinated, and greatly accelerated program.

Since future benefits from conservation are always far greater than current returns from it, since off-site benefits are nearly always underappraised or entirely overlooked, we have greatly underestimated or ignored public benefits. Both benefits in the distant future and off-site benefits are of predominantly public concern and interest. The individual always places a heavy discount on future values; but no nation can afford to discount future values too heavily. The neglect of the public concern in conservation work on farmland has, therefore, been the principal reason we have not made sounder or more adequate progress on conservation. I am not implying that we have given the proper consideration to the private aspects of conservation. We have done a poor job of getting facts across to the land operator and owner on how important conservation is to his present and future welfare.

A proper development of land, water, power, recreation, mineral and wildlife resources on a given farm as well as on an extensive or small wasteland, can be planned adequately only if there is a coordinated planning and development from the tips of all streamlet areas to the mouth of the biggest river draining the entire watershed into the ocean. This does not mean that such an overall watershed area cannot logically be broken down into subdrainage, or soil-conservation districts, for purposes of sound detailed planning development and administration; but it does mean that no planning can be sound and complete until plans for such subdrainage areas are coordinated with the overall plan for the maximum extent of the drainage area, or the overall watershed.

The reason for this necessity of coordinated planning of a maximum watershed is obvious. No resources development is justified unless ultimately it yields to society as a whole, and to individuals, more benefits than it costs, with proper evaluation of all future as well as current benefits and costs. But the totality of benefits derived from a terrace, a check dam or any of the water and soil conservation measure in the tiniest upstream area, can be evaluated not by consideration of the effects of each of these measures solely on the land on which it is placed, not by the effects off the land only in the immediate drainage below the farm, but only by an evaluation of the sum of the infinitesimal effects of these upstream measures in reducing and retarding the movement of water and silt in every foot of the maximum drainage area of which the small upstream treated area is a part.

Furthermore, no one can possibly calculate, or estimate, the total benefits of farm conservation measures on the uppermost stretches of a maximum watershed area unless he takes into account, not only all the benefits to the farm itself, but benefits to the downstream areas by these measures. Not only present improvement measures are protected but all future construction must be taken into consideration in estimating conservation needs and benefits.

A direct corollary of this truth is that the costs of all soil and water development measures on a farm in the upper stretches of such a maximum watershed area which affects lands and other values on the drainage area below, cannot be equitably charged up entirely to the farmer on whose farm the conservation work is done. Nor can an equitable proportioning of these costs be made between private and public beneficiaries, unless the proportions of all benefits both on and off the farm can be accounted for and used as a basis for allocating the costs between the farmer, other benefitted properties, or the general public. This is a most complex and tedious job. It is one that requires not only the skill of the soil-scientist but that of engineers, hydrologists, reclamation forest and siltation experts, economists, and in fact almost every conceivable occupation dealing with the natural, economic, and social sciences and skills.

Obviously the soundness of measures of planning and development in the lower parts of the watershed, to a large extent, depends on what can and should be done on the upper stretches; and conversely what can and should be done in the upper stretches depends on the extent of proposed development to be protected in the lower stretches. In many watersheds the protection of downstream channels and structures from silt originating on farms is one of the biggest items of benefit that can be credited to upstream work. Values of both the up and down stream improvements are in part dependent on the other. Certain measures to protect expensive and highly necessary works downstream may be required in upper stretches that would not otherwise be justified if conservation on the farm only were considered. If there is any logical priority as to upper or lower development it seems to me that the upper improvement should take precedence. On most watersheds we take the reverse course and put costly downstream works on the stream with little or no attention to protection by upstream works.

I would like to parenthetically bring out a thought which comes out as a result of Mr. Lynn's statement about the Corps of Engineers doing more harm than good, in accelerating floods. The particular quotation which he used pertained, Congressman Lovre, to the work between Kansas City and St. Louis, on the channel there. I am pretty sure that quotation was with regard to that work between Kansas City and St. Louis, and not the dam you spoke of. I think that would clarify the meaning of that statement.

I am very much inclined to believe that that statement is true; that what the Corps of Engineers has done between Kansas City and St. Louis must be largely wasted, as the committee of the House found by an extensive study of last year. You will remember some committee of the House studying that.

The CHAIRMAN. Although I am not quoting from any recent reference to the report which was made, I think in essence that committee found that the Army engineers in attempting to make the Missouri navigable between Kansas City and St. Louis had created greater flood problems than existed before. In other words, they were working toward two ends which were contradictory to each other. I think that was the conclusion.

Mr. SANDERS. I think that is true.

Mr. LOVRE. I wonder, Mr. Chairman, when the program is completed, if that will not alleviate the trouble which Mr. Sanders has reference to?

The CHAIRMAN. It might to some extent. The farmers along the stream, many of whom appeared before the Missouri Basin Survey Commission, in this particular area, complained very bitterly because they said the engineers had narrowed the channel in order to bring about navigation and that that had greatly increased the flood hazard. Their lands were being flooded because the narrowing of the channel was preventing the river from carrying the normal amount of water. Of course, it may be that if the dams upstream are so constructed as to regulate the flow, so that it could be carried by the narrow channel, that might be the answer to it. On the other hand, a lot of floods are going to originate below the dams in South Dakota.

Mr. LOVRE. That is the purpose of the Gavins Point Dam, to regulate the stream. With Gavins Point you will have an even flow downstream, which will alleviate, I believe, the trouble which has been mentioned.

The CHAIRMAN. That may very well be, except I do not see how it could alleviate it as to floods which might originate below the Gavins Point Dam.

Mr. SANDERS. They not only narrowed the channel, Congressman, but they straightened it. Much of the increased flood damage which was criticized by the committee was flood damage below St. Louis, or down near St. Louis, caused by the straightening of that channel and narrowing it. They shot the water through faster, presumably.

Mr. POAGE. If the gentleman will yield; farther down below St. Louis and even below Memphis you will find a situation where the levee is higher on one side of the river than it is on the other side. Of course, it is perfectly obvious that when you have a levee which is higher over here and lower over there when you get that river full to the height of the levee on this side, one side is protected and the other is not. Obviously, the people who live on the side of the levee which is low naturally complain.

Mr. SANDERS. That is right. Back to the manuscript.

An undeveloped dam site may remain unimpaired for decades and even centuries, and society thus loses only the passing, but not future, potential benefits. On the other hand, fertile soil allowed to wash into the ocean is nonrecoverable. Thus when soil and water conservation is needed, and is wanting, we lose not only the passing use of these resources, but, far more important, we lose future uses of them. This is why farm conservation is of paramount public interest. We are reasonably certain, therefore, that wise statesmanship would require priority of upstream developments. This truth, however, does not lessen one whit the sobering fact that an overall and complete planning and development of a maximum size watershed is urgently essential for the greatest economy and welfare of a watershed and of the Nation.

All of us need to take more seriously the obvious need for overall planning and development of entire watersheds; and we have not given the proper consideration to the fact that piecemeal parts of watershed cannot be planned and developed soundly without an overall coordination of plans for all parts. Also, Congress has not given due consideration to the fact that haphazard planning and development is very wasteful of both private and public funds, especially the latter. We doubt very seriously, however, that a knowledge of all needed plans of development on the lower stretches would radically change

the type of conservation measures needed in the upper stretches, although as previously stated there is probably some such relationship on every watershed. To a far greater extent, however, development on the lower reaches of a watershed relies on what is done to develop the upper reaches.

I should qualify that to say, "To a far greater extent, however, sound development," because that is what I mean there; and not just development.

Since the Congress has as yet not taken the proper cognizance of the need of unified development of the upper, middle, and lower stretches of maximum watersheds, and since nonfarm development measures such as large unprotected reservoirs on the main stem of such major streams as the Missouri have been pushed far ahead of sound upstream conservation, we believe that those in charge of agricultural welfare in the House should give serious consideration to ways and means of giving the needed impetus to conservation upstream, in order that we may have a proper balance between upstream and downstream improvement.

Before taking up in detail the problem of giving proper impetus to farm conservation, I would like to bring to you briefly our view on how balanced conservation work can be carried out—the administrative requirement of sound watershed development.

In the first place, it is obvious that we believe unified planning and development of major watershed or drainage areas is necessary. Possibly there would be as many as 20 such major areas if the Nation were blanketed with them. Some of these would be areas of several smaller separate streams with reasonably homogeneous conservation problems, such as a number of streams of Texas flowing into the Texas portion of the gulf, not including the Rio Grande.

If the Nation were blanketed with such major administrative units, if they were independent bureaus such as is TVA, with the authority to hire both their administrative and technical or professional staffs, if each were independent on its own appropriations, such a watershed development system could become a powerful and dangerous bureaucracy or combination of bureaucracies that would make the Rivers and Harbors Congress look puny as a lobby group. Such a bureaucracy would have large independent staffs located in or near every Congressman's or Senator's district or State. In spite of all civil-service efforts to the contrary, much of this staffing would become patronage. No Congressman or Senator could safely stand up against his "own watershed" demands; and for trading purposes it would soon become necessary for him to tread lightly on the requests of the watersheds of other Congressmen and Senators. Furthermore, such independent watershed administrations staffed independently would in time destroy national policies and programs of forestry, reclamation, soil and water conservation, wildlife, and other national resources programs and policies. We would soon have 19 or 20 such sets of policies, and not only would this system endanger Federal resources policy, but since it would cross over State lines, it would, in time, dominate and greatly interfere with State and local resources development programs.

As commendable as has been the physical work of TVA in general, the National Grange cannot support a duplication of it on all other watersheds. We believe an overall watershed administration that can

unify and coordinate planning and development, that can avoid bureaucratic staffing, that can preserve Federal, State, local, and individual resources interests and programs can and should be developed. We believe it is fear of the power of duplicated TVA bureaucracies that has caused Congress to shy off of the necessary problem of unified watershed planning, development, and administration. Obviously we cannot undertake to present in detail a sound major watershed program in this appearance. It would be out of place to do so in necessary detail. But it is important to give you an outline of the essentials of our policy.

The following is the gist of a formal resolution the grange passed in 1949 on this extremely important subject and has reaffirmed in successive sessions:

> We recognize the urgent need for coordinated development and use of resources on major watershed areas.
>
> We believe that the coordination of the work of all Federal, State, and local agencies dealing with conservation, development and use of soil, water, forest, and other natural resources on each major watershed area can be achieved:
>
> (*a*) At the national level, by the unified administration of the agencies dealing with reclamation, flood control, and with soil, water, and forest conservation and uses.
>
> (*b*) On major watersheds, by the establishment of a bipartisan policymaking board to be composed of representatives of the major Federal agencies and of the watershed area, the board to be appointed by the President and confirmed by the Senate, with a majority of the board members representing the water shed area. Before making such appointments, the President should be required to call for nominees from the governors of the States involved. This board should be responsible for determining policies, employment of management and administrative staff only, and the expenditure of funds appropriated directly for the planning and development of the watershed.
>
> The personnel of existing agencies in the fields of research, engineering, education, and resources development, of both Federal and State Governments should be utilized on assignment, or on a contract and reimbursable basis, so that the need for professional staffs, employed by the watershed authority, may be avoided.
>
> (*c*) By approving no expenditures of funds for a project or a dispensable part of a project, unless a sound appraisal shows benefits in excess of costs.

Such a watershed machinery would prevent the building up of powerful bureaucratic and patronage agencies in watershed areas; it would preserve present national resources policies, programs, and agencies; would insure, we believe, a far more efficient personnel to plan and develop watersheds, and would decentralize responsibility.

Parenthetically, I would like to state that the Grange believes very strongly that it is highly necessary to continue Federal resource supervision of some kind, because we have national policies and policies of watersheds which cut clear across State lines. How would you administer wisely and soundly, in a well-rounded way, the resources planning in the upper Missouri, when what you do there affects it clear down to the mouth at New Orleans? To a certain degree you must preserve Federal control of resources work, in order to incorporate these necessary Federal functions and policies.

The national sessions of the Grange for the past several years have deliberated long and studiously on the problem of farm conservation—the nature of sound conservation, what agency in the Government can best carry out conservation, and how to coordinate the efforts of all agencies interested in conservation at Federal, State, and local level. Rather than quote in full these several actions that we have passed dealing with many aspects of conservation, I shall summarize the 2

major policy statements, 1 on farmland conservation and 1 on forest resources conservation. The farm conservation policy provides that:

(*a*) Conservation programs should be democratically determined—

I would like to qualify that summary, which I did not do when I wrote it, as I see. Our statement really says that conservation programs should be as democratically determined as is practicable.

(*b*) All land-use ordinances, tax measures, or land-use regulations on private land should be under State or local jurisdiction and not under Federal statute.

(*c*) The Soil Conservation Service should be retained and expanded as an independent agency charged with all conservation on farms, and all such Federal functions now performed elsewhere should be transferred to it, wherever this is practical.

(*d*) A coordinated program by the Soil Conservation Service should include conservation on public land, public highways, and public-utility lands.

(*e*) We wholeheartedly approve soil-conservation districts set up by State laws and locally administered.

(*f*) Special educational efforts should be made to correct maluse of wind- and water-eroded land by shifting these into grass.

(*g*) Adequate public and private credit for soil-conservation practices should be available.

Our forest-conservation policy provides that:

(*a*) Technical assistance toward development and maintenance of private resources should be given by Federal and State agencies.

(*b*) Adequate appropriations should be made for purpose of reseeding, fencing, developing of water sources, and general improvement of Federal rangelands.

(*c*) Through State and Federal cooperation we urge assistance be given private farm forestlands in fire control, supplying stock for reforestation, and technical assistance.

The subject of large dams versus small dams is a problem directly connected with the purposes of these hearings. In our last session considerable discussion and thought was given to this subject, and the following formal action was taken:

> It is our firm conviction that previous appropriations for watershed planning and development have disproportionately emphasized the construction of big dams and have often provided for wasteful works on main stems of rivers by the Army Corps of Engineers without adequate upstream measures to protect these downstream structures from siltation and other damage.
>
> Therefore, we oppose any further plans for such disproportionate appropriations for downstream structures until sound, adequate plans and appropriations have been made for necessary upstream measures to accompany those requested for the downstream improvements, and we oppose any such downstrem structures where smaller, more effective, and less costly upstream structures can take the place of the downstream works in the areas where flood control and soil conservation are the major issues.

Recently I had occasion to inquire into a flagrant proposed misuse of a large dam at Mount Upton, N. Y., without sound appraisal of its effects on agriculture of the area. It proposed to inundate almost exactly half of 70 farms—the half on which almost all feed crops were produced—leaving for these 70 farmers only the half of their farmland that lies in the adjacent hills, and which is used almost exclusively for grazing of their dairy herds. Yet in analyzing the costs of this project

only the flooded lands were included at their current values. In fact, to destroy the use of the alluvial half of these farmlands destroyed the entire value of the farm as a going concern. Furthermore, it destroyed the use-value of all farm buildings since they no longer would serve the kind of farm organization for which they were built.

This is pointed out to bring out the grave errors that are now being made by the Army Corps of Engineers in planning this kind of dams all over the land. In the first place, with present independent methods of operation of the corps, no consideration is, or can be, given to the question of whether upstream conservation supplemented by a number of small dams would be sounder than the large dam that is so destructive of farm business and life. In the second place, the function of surveying the economic cost and effects of these large dams on the agriculture involved should be taken away from the corps and an assignment of this function should be made, by amending the Flood Control Act, to the Soil Conservation Service of the Department of Agriculture. The corps is not qualified either in training or viewpoint, and never can be, for doing this portion of work in a sound and equitable way for the farmers involved. The Tuttle Creek Dam in Kansas is notorious in this error. I hope this committee will give the most careful consideration to this needed change.

The National Grange has recommended, at its past two annual sessions, a transfer of all agricultural conservation work previously administered in PMA to the Soil Conservation Service; and a discontinuance of much of the expenditures for ACP work—those that are not made for permanent soil and water conservation purposes. We believe that the farmer should perform those jobs that he would do in the normal course of sound operation of his farm.

However, we are in hearty accord with working out sound and adequate supplies of necessary credit for farmers who need such credit to enable them to carry out conservation work needed on their farms.

We appreciate very much the opportunity the committee has given us to express our policies and views on the vital problems of farm conservation, and will be glad to cooperate further, as is necessary, in working out the needed additional legislation to speed up this job that is so vital to our national welfare, both present and future.

Mr. Chairman, some 3 or 4 years ago I wrote an article on the administration of planning and development of watershed resources. It is a statement of some 11 pages, and it explains somewhat more in detail than I did in the body of this paper what I think is a sound administration of water and land resources on a major watershed. If the committee would like for this to be a part of the record I would be glad to leave it, although I am not requesting that unless the committee wishes to have it made a part of the record.

The CHAIRMAN. Is there objection?

Mr. POAGE. I ask unanimous consent that it be placed in the record.

The CHAIRMAN. Mr. Poage asks unanimous consent that it be placed in the record. If there is no objection that will be permitted.

(The document is as follows:)

The Administration of Planning and Development of Watershed Resources

By J. T. Sanders, Legislative Counsel, The National Grange

April 18, 1951.

Some months ago a nationally known magazine carried an article on the proposed CVA stating that such authorities would in time, if passed as proposed, destroy the major functions of State governments. I believe such a danger does lurk in these proposed powerful full-time three-man boards, which would operate with large Federal appropriations and would employ large technical and professional staffs which means great patronage opportunities, and would be clothed with vast powers to develop and operate land, water, forest, power, and other natural resources.

But this is not the total extent of the danger in such powerful independent authorities. If they blanketed all our major drainage areas, they would in time be equally dangerous to our Federal Government and to most of our Federal resources agencies. These authorities, if widespread, I believe could in time easily replace and destroy the national policies and functions of the Soil Conservation Service, the Reclamation Service, the Forest Service, the Federal Power Commission, and the flood-control functions of the Corps of Engineers.

If such powerful independent bureaus were to cover the Nation geographically and were to build up their own technical and professional staffs, few Congressmen or Senators or combinations of them would dare stand out in opposition to them, since loss of too much patronage would be involved. The combined logrolling and patronage power of such widespread watershed authorities would dwarf past river and harbor logrolling. They would form for the first time in our history the first complete geographical coverage area for political patronage.

This is no scare talk, no mere journalistic flight. Yet despite this fact of grave danger inherent in watershed authorities, the establishment of authorities on all major watersheds seems inevitable in the not too distant future. It's inconceivable that we shall continue to waste great amounts of public funds in unsound resources planning and development as we are now doing in the Missouri and other watersheds.

No part of the Nation, urban or rural, can avoid any longer realizing their own vital interest in water and soil conservation. Note the universally recognized fact of a lowering of water tables all over the land; the recent serious predicament of the city of New York in the matter of water supplies; the obvious inexcusable erosion of land in all sections with enormous silting and flood damages in countless urban and navigation areas and the recent pressure against our available supplies of electricity in nearly all parts of the country. These and many more such warnings we can't continue to ignore.

Essentially we must devise ways that these watershed boards can coordinate the efforts of all Federal, State, and local resources agencies without replacing or destroying the functions of these agencies; and to do this without building huge patronage-dispensing agencies out of these watershed boards.

Such authorities or watershed boards must also be amenable to necessary State and local interests in the basin under their jurisdiction, and must not be a means of great centralization of power in Washington. They cannot safely be set up as powerful independent bureaus of the Federal Government as is the TVA or as would be the currently proposed CVA. The purpose of this statement is to outline in broad detail how watershed authorities can be set up and operated to meet the above-stated requirements.

The purpose of this discussion is to show also that sound unified planning and development of resources over extensive watersheds can be accomplished without impairing our free-enterprise economy and our sound balance of powers between State and Federal Governments; that these can be done with the full coordinated use of present personnel in all interested State and national resources agencies; and that it can be accomplished without building up strong bureaucratic organizations on each of the major watersheds.

WATERSHED PLANNING AND DEVELOPMENT IS BOTH A PRIVATE AND PUBLIC RESPONSIBILITY

The sound, permanent conservation and use of all land, water, power, and mineral resources of an extensive watershed is such a complex problem, involves so many private interests, and extends over such a long period that only public endeavor can direct the job.

Potential uses of water resources are often entirely beyond the individual's power to develop. Downstream land-use difficulties caused by upstream misuse of land are, without Government aid, entirely beyond remedy by the downstream land user, and the upstream users have no direct interest in effects in lower reaches of the stream.

Any use of farm or other land on the upper stretches or reaches of a watershed which permits destructive runoff and erosion is not only unwise for its owner but, as a rule, impairs the use and value of land and the water in the watershed many miles below the area of misuse. Likewise, the unwise use of private or public lands subject to erosion by winds may cause its blowing in such a way as to do serious damage not only to the blowing land but to adjacent or even distant land. Pollution of streams is of vital private and public concern to the whole watershed. Wildlife also is influenced by watershed development. Thus, land and water utilization, planning, and development becomes a problem of use, not only in the interest of the operator and owners of the land, but in the interest of all who reside on the watershed, and in a broad sense the general social interest.

Slightly over one-half of 1 billion acres of all of our land surface is under the direct ownership and care of farm operators. Possibly 400 to 500 million additional acres are under public ownership of one kind or another, leaving around a fourth of all surface that is owned for industrial, urban, and other purposes.

It is evident that the greater portion of the area on which development work is to be done involves privately owned farm lands. Even at that, a sound watershed plan involves works on public-owned forest land, problems of stabilizing rights-of-way of public roads and railroads, and extensive works on urban and other public lands. A complete plan for a watershed development, in short, involves almost the entire cross section of economic and social life of the watershed. This unity of the problems of a watershed holds true with the biggest as well as the smaller watersheds.

Specifically watershed planning and development should coordinate all public and private use of forest and farm land, should provide the proper protection of uplands from erosion, and of lowlands and the cities and industries on the watershed from flood, siltation, and other damages. It should provide for maximum individual and public returns from soil improvement, moisture conservation, and for use of the water resources of the watershed for power, irrigation, domestic, navigation, and industrial purposes. It should also include a definite, effective coordination of programs for improvement of farming and farm life in the watershed, such as submarginal land resettlement projects, tenure, credit, and conservation programs. It should also be related to existing or needed transportation facilities, and industrial and social institutions.

Watershed planning units should be sufficiently large to justify a well-rounded and complete economic planning and administration of the land and water resources of extensive drainage areas; and should be sufficiently large to include all areas that receive appreciable amounts of indirect benefits from improvement measures on the lands.

Obviously the coordinated planning of the use of both lowland and upland is a unified problem, a watershed problem. No mere political subdivision can suffice for such a plan of soil, water, and other physical resources development and a complete and satisfactory accounting of the benefits from this development.

PRESENT METHODS OF WATERSHED DEVELOPMENT ARE WASTEFUL OF RESOURCES OF PUBLIC FUNDS AND OF PERSONNEL

Yet at present, this complex extensive job of planning and development is done by dozens of official Federal, State, and private agencies working almost entirely independently of each other, in overlapping areas of administration, and often working independently on the same farm or land area. The job cannot be done piecemeal and in small units such as our present soil conservation districts and other public administrative areas. Farm conservation work is an integral part of developing the entire major watershed. Reforestation likewise is more than a mere planting and profitable production of timber on a given tract of land by the owners of forest land, for it also affects the lowest stretches of the watershed. Not only timber value but flood control and other values must be considered. Obviously the Forest Service alone cannot do this type of widespread work—its interests center around the land it owns and manages. The problem of the right combination of reservoirs on a watershed (that is, shall they be large downstream reservoirs, small upstream ones, reservoirs for power, for irrigation or for flood control, or a combination of some of these) is likewise a unified watershed problem. The life and use value of all these reservoirs are affected greatly by upstream con-

servation on farm and forest lands. Yet our present national policy persists in placing the planning and building of reservoirs in the hands of at least three or more independent Federal departments that have no authority or interest in coordinated use of these reservoirs and in farm and forest land conservation.

Depending on which agency is authorized to build a dam, one that should emphasize irrigation may be designed and utilized in the main for flood control and vice versa. Again a requirement that may call for a distinctly multiple-purpose structure may be ignored or may be seriously impaired by one agency interested only in flood control building a structure mainly for flood control—thus wasting more valuable irrigation and power resources. Yet the future well-being of thousands of farm families and the permanent sound use of hundreds of thousands of acres of dry lands may depend on the irrigation and power services from the dam. It is obvious that to obtain the proper coordination required for these jobs, it is necessary to place under one coordinating agency the responsibility for developing a plan for an adequate-sized watershed.

One has to examine only casually the present unsound "patched together" combination of the Reclamation Service, the Corps of Engineers, and the Department of Agriculture for further development of the Missouri Valley to realize the collossal wastes that face us with a continuation of the present uncoordinated way of doing watershed work. Yet recent Congresses have appropriated large amounts of funds to continue extensive work on the Missouri River without a sound coordinated watershed plan.

Even schools, roads, and churches are vitally affected by watershed plans. Whole, or parts of, school districts are obliterated by reservoirs. Long-time school enrollment, revenues, and expenditures will be greatly altered by watershed development. Roads need to be abandoned, rerouted, and new ones carrying new traffic loads will be needed. Rural electric and telephone lines, and mail routes, must be altered and planned for less population in submarginal use areas where present population loads are too heavy and poverty prevails. Sound watershed planning must help such blighted areas to adjust themselves to a more truly American standard of opportunity. Additional educational and other services must be provided in areas newly protected from flood or in irrigated areas where increased productive farming is opened to a larger population. These problems clearly are wide in scope, and must be planned as integral parts of watershed development plans. No private corporation, no county, irrigation district, Army Corps of Engineers or soil-conservation district, or the present agencies administering these areas can coordinate all of these diverse problems. A unified and permanent solution of such complex problems involving such diverse Federal, State, and local agencies and private interests can be obtained only by an administrative unit cloaked with full authority in matters of planning and developing a watershed of the proper size and of obtaining and coordinating the services of the experts in the various agencies for use in connection with watershed plans and development.

Under the present widely dispersed administration of these agencies, it is absolutely impossible to get the cooperation from their staffs that is required to evolve a coordinated plan and development of a watershed. The result of such an effort at present is a piecemeal, uncoordinated, and often a conflicting and waste ul set of plans of development. Conflicts as to time of building, kind of measures, and results and caimed benefits are commonplace.

Each group of scientists working on watershed plans at present is under the direct supervision of its Washington or State organizations. Each group tends to give first consideration to the wishes of its central office and little consideration to coordination of its work on the watershed with that of other agencies. Each is usually uninformed on details of the works the other agencies are planning. The results are as a rule a plan that is incomplete and impractical.

These independently budgeted and managed Federal agencies can never, acting independently, coordinate their planning efforts. Even if it were possible to evolve a sound plan for a watershed, with such a scattered administration, the resultant development of the watershed would never be consistent with the plan, however, well this plan may have been initially worked out.

The Federal, State, and local agencies that are at present interested in watershed plans and development have great numbers of men and women on their staffs who have had invaluable training and experience qualifying them as expert watershed planners and development specialists. But they have as yet had little opportunity to help in this great potential service in an effective, cooperative way. They will never get such an opportunity for coordinated planning under the present loose, wasteful Federal arrangement of planless watershed development. Furthermore, these employees of regular government agencies that evolve

National and State policies in their special fields, such as soil conservation, reclamation, flood control, forestry, etc., would not be utilized by independent watershed boards that were empowered to employ their own staffs such as is the case with the TVA. There is a way, however, that this great reserve pool of talent can be used. This way is outlined below.

HOW WATERSHED PLANNING AND DEVELOPMENTS SHOULD BE ADMINISTERED

The TVA and the proposed CVA are, or are to be, administered by three-man full-time boards. This board is hired by, gets its funds from, and is answerable only to, the National Government. Such a full-time board inevitably must be a triumvirate managerial board. No one ever saw such a three-man board manage a complex business in a unified way. If each board member is competent, they inevitably divide the management between themselves, which cannot give good management but only divided management; or they get at loggerheads with each other as did the TVA Board several years back. Also if they are competent and are full-time employees, any administrator they may employ must in reality become a figurehead.

Watershed planning and development, I am convinced, should be under the direct administration of a single watershed board—or authority—but this board should not be a full-time board. It should in the strictest sense be a policy-forming board, not a management board.

Such a board might well consist of 7 members—3 representing the Federal Government or its interest, and 4 representing local or watershed interest; the 4 local members should be selected as democratically as practical. Possibly the President should be required to appoint the 4 representing the watershed area from 20 nominees made from both political parties equally by the governors or legislatures of the major States represented in the watershed. The three representing the national interests might well be appointed by the President and could be appointed from the Government departments having major planning and development interests on the watershed—such as from the Reclamation Service, the Department of Agriculture, and the Corps of Engineers. All members of the Board should be approved by the Senate. The Board members should have a 7-year tenure of office that rotates; that is, the terms of one member should expire each year. Continuity of policy is vital to planning and developing a watershed, and a rotating membership of the Board will facilitate continuity.

The Board should have authority to employ a watershed administrator, but neither the Board nor the administrator should be authorized to employ any of the technical and scientific staff used in planning the watershed and in the work of developing this plan. The administrator should be authorized to employ his immediate administrative staff only. He should not only be a man of broad administrative experience, but also be experienced and trained in resources development. The Board should be rigidly limited to the selection of administrators with these qualifications.

All scientific, engineering, professional and skilled personnel used by the administrator in planning and developing the watershed should be assigned to it upon request by the administrator of the watershed from constituted public resources agencies, either of the local, the State, or the Federal governments. Thus the needed agricultural engineers, hydrologists, economists, agronomists, soil and conservation specialists, foresters, and other agricultural specialists required to develop the agricultural phases of a plan should be supplied to the watershed by assignment from the State agricultural colleges, experiment station staffs, other State agencies, or the staffs of the United States Department of Agriculture. Highway engineers should be assigned by the State or Federal highway agencies. Engineers for planning and supervising construction of reservoirs for impounding water for flood control, navigation power, and/or irrigation, should be assigned to the Board by the Corps of Army Engineers, the United States Department of Agriculture, or by the Reclamation Service of the Department of the Interior. The Board should be empowered to enter into contract with private agencies or individuals for construction of any officially planned and approved part of the watershed program. School experts, farm credit specialists, etc., needed to adjust their respective functions to the overall watershed plan could be assigned to the watershed administrator and their salaries would be paid for by him while they are needed for planning these miscellaneous public functions for the watershed.

This staff of specialists, consisting of representatives of the State and National Departments of Agriculture or of the State colleges, representing the Extension Service, the Farm Credit Administration, the Farm Security Administration, the Agricultural Adjustment agency, the Forest Service, the Soil Conservation Service,

the Rural Electrification Administration, the Reclamation Service, the Army Corps of Engineers, etc., would compose the scientific and professional staff to plan and develop the watershed under the direction of the watershed administrator and under the policies determined by the Board. The plan should call for meshing the regular work and policies of each of these Government agencies into the overall plan of development of the watershed. Adjustment to the requirements of the unified watershed plan, however, should be dominant over the specific policies of the agencies furnishing the scientific staff.

If the watershed administrator were at any time dissatisfied with the work and cooperative relation of a technical worker or a professional assignee to his staff, he could not discharge the worker from his supplying agency but could ask for his recall by, or return to, this agency, and ask for an assignment of a substitute worker.

The watershed board, through its administrator, should have charge of all funds primarily appropriated for use in planning and developing the watershed; and would compensate by reimbursible vouchers all Government agencies furnishing technical and professional workers.

Since such a watershed board could not build up a large permanent technical and scientific staff of its own but would have the power of employing only a relatively small administrative staff, the probabilities of the board becoming a political power on the watershed would be reduced to a minimum. Such a board would have very little opportunity to dispense political patronage in their work. Their interests would , therefore, lie largely in a thorough going, scientific, and efficient long-time development of the watershed in accordance with plans—and not in building up a large permanent staff that would duplicate and in time replace the scientific functions of staffs in other Federal and State agencies.

NATIONAL REGIONAL AND LOCAL COORDINATION IS NECESSARY IN UNIFIED WATERSHED PLANS

The overall planning of the watershed should be participated in by local soil conservation district committees set up by the Soil Conservation Service. These committees should be composed of people closely associated with farming in the local areas in which they serve. Their function would be that of guidance and advice in planning the measures that are to be applied on the various types of farmlands in their local district or local watershed. Consideration especially would be given by the committee to the practicability and acceptability of these measures to farmers. But these committees would also be expected to adjust their recommended measures to the overall plans and needs of the watershed as well as to the needs of the farmers.

The planning for each of the various administrative watersheds of the Nation would necessarily need to be in line with development on adjacent watersheds, and with regional and national policies. This harmony of policies on different watersheds and with national policies could be secured by requiring that all plans and requests for national appropriations for watershed planning and development should clear through and be approved by a "National Resources Board" before submission to Congress. This National Resources Board should be authorized to employ a staff of planning coordinators to be assigned to specific watersheds as economic and technical consultants. These representatives of the National Resources Board would have as their main function the hormoninzing of national and local interests and interwatershed problems.

The CHAIRMAN. Thank you very much, Dr. Sanders, for your statement. Are there any questions?

Mr. SANDERS. Thank you very much, Mr. Chairman.

The CHAIRMAN. You have covered the subject so well that we do not have any questions. Thank you very much.

That concludes our list of witnesses for this morning. The committee will resume its sessions on Tuesday morning at 10 o'clock, at which time we will hear from a group of witnesses who will be brought here under the leadership of Mr. Raymond McConnell, Jr., Chairman of the Citizens Committee on Watersheds and Water Conservation.

The committee is adjourned until 10 o'clock Tuesday morning.

(Thereupon, at 12:20 p. m., Friday, May 1, 1953, an adjournment was taken until 10 a. m., Tuesday, May 5, 1953.)

SOIL CONSERVATION AND WATERSHED PROGRAMS

TUESDAY, MAY 5, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10:15 a. m., in room 1310, House Office Building, Representative Clifford Hope (chairman) presiding.

Present: Representatives Hope (chairman), Andresen, Hoeven, Dague, Lovre, McIntire, Williams, Grant, Albert, Thompson, and Jones.

The CHAIRMAN. The committee will come to order. First this morning we will hear from our colleague, Carl Curtis of Nebraska, who the Chair understands will make a brief statement and then present some of the witnesses who are to appear this morning. We will hear from you, Mr. Curtis.

STATEMENT OF HON. CARL T. CURTIS, A MEMBER OF CONGRESS FROM THE FIRST DISTRICT OF NEBRASKA

Mr. CURTIS. Mr. Chairman, I am happy to be here and I want to commend the chairman and the committee for undertaking these hearings. I am in accord with the objective of the bill before the committee, H. R. 4877. It is extremely important that we preserve the fertility and the productivity of our soil. The future strength of our country economically is dependent to a large measure upon how good a job we do in preserving our soil. Soil conservation, water utilization, and flood prevention are all one problem. To a large extent they are an agricultural problem and should be met by the agricultural leadership of our Nation.

We need a national policy. We need participation in this enterprise by the individual farmers, farm organizations, soil-conservation districts, watershed associations, and the Federal Government. The individuals and the local units should bear their just share of the cost of such a program.

I am happy to be here to present two individuals to the committee. Both men are well known and in a sense need no introduction. I refer to former United States Senator, Fred Seaton of Hastings, Nebr. As a citizen, publisher, and as a State and National legislator he has been an ardent supporter of the conservation of our natural resources. He is generously giving of his time to promote a better program of soil conservation. I know that his comments will be helpful to the committee.

The other gentleman is Mr. Raymond A. McConnell, Jr., editor of the Lincoln Journal newspapers. Mr. McConnell is cochairman and

one of the originators of the Salt Creek-Wahoo Watershed Association. His activity has extended beyond our State of Nebraska. He was chairman of the group of national leaders who called upon President Eisenhower on February 25, 1953, to discuss this very question. He too has very unselfishly given of his time and talents in promoting soil conservation. The material he will present will form a good basis for the study of this committee.

I would also like to have extended in the record, following the presentation this morning, a statement submitted by Mr. Harry Strunk, president of the Republican Valley Conservation Association, an organization that has a long record of accomplishments in the conservation and development of our natural resources.

Mr. CHAIRMAN. I now wish to present Mr. McConnell, who in turn will call upon the others.

The CHAIRMAN. Before we hear Mr. McConnell, the Chair would like to state that we may be confronted with a quorum call almost any time, as the House is now in session. However, we have decided to go ahead with the hearing unless there is a quorum call or a rollcall.

If that should occur, then we will be confronted with the question of what we should do in the way of continuing the hearing. I would like to ask Mr. McConnell at this time if he and his witnesses could be here tomorrow in case the hearing is interrupted today? What is your pleasure in that regard?

Mr. MCCONNELL. Mr. Hope, I cannot be here. It may be that some of the group could be. We have prepared testimony that very well states our views. If your committee has to adjourn, we would be very happy if you could incorporate our prepared testimony in the record, whether we can get a chance to read it or not.

The CHAIRMAN. Of course that could very easily be done. We would be happy to do that. But we want to hear from your witnesses in person if that is possible. Suppose we proceed and go as far as we can. If there is an interruption, we can decide at that time just what we can do in the way of concluding this hearing as far as this group is concerned.

We would be very happy to hear from you at this time, Mr. McConnell.

STATEMENT OF RAYMOND A. McCONNELL, JR., EDITOR OF THE LINCOLN (NEBR.) JOURNAL, ON BEHALF OF THE NATIONAL INFORMAL CITIZENS COMMITTEE ON WATERSHED CONSERVATION

Mr. MCCONNELL. Thank you very much. I would like to ask if this statement of mine could be put in the record so that I would not have to read it here verbatim.

The CHAIRMAN. Yes. Certainly that can be done. Without objection it will go into the record at this point, and you may proceed in your own way.

(Mr. McConnell's statement is as follows:)

STATEMENT OF RAYMOND A. MCCONNELL, JR., EDITOR OF THE LINCOLN (NEBR.) JOURNAL

In keeping with broad objectives set out in a statement of proposed principles which were offered to the administration and the Congress for consideration by an informal citizens' committee on February 25, 1952, it is this committee's intention,

now, to outline some significant aspects of operating policy for further consideration stressing local initiative and Federal-State-local cooperation. This follows our desire to bring to your attention conditions laid down at the local level which we believe can assist in guiding the Federal agencies and the Congress in doing the kind of job people want done, and doing it without wasteful spending and duplicated effort.

Local initiative and management on a sustaining basis is essential to the success of a watershed program. We believe local interests should exercise the right of saying what they want and when they want it with regard to watershed programs. But in exercising that right they must take the responsibility of participating fully in planning, education, operations, research, and most important of all, bear their fair share of the cost of doing the job. We have no intent whatsoever to consider watershed programs as a giveaway sort of boondoggle. That local interests themselves are aware of responsibilities they must assume is evidenced by the trend toward obtainment of enabling legislation at the State level providing for the creation of watershed districts. Most, if not all, States have kinds of enabling legislation, such as conservancy district and drainage district laws, which could be used as a basis for cooperation between the Federal Government and State and local groups. However, a large number of States are conscious of the need for a somewhat different type of enabling legislation requiring specific responsibility of local interests in carrying out watershed programs. Nebraska and Kansas this year have written into law such legislation. We believe other States soon will follow.

Our brief discussion of local initiative is not complete without reference to soil-conservation districts. Work now being performed in these districts constitutes a most important part of a complete watershed program. The fact that the Secretary of Agriculture has entered into memoranda of understanding with 2,500 soil-conservation districts in the United States is further expression of local initiative and Federal-State-local cooperation. Under the watershed approach the work of the soil-conservation districts certainly would be expanded and increased.

At Federal level we are aware that legislation has been introduced (H. R. 4877 in the House and Senate bill 877 in the Senate) which would make the work of local people in watershed or other districts more effective and efficient. As one aspect of this, it would offer a concrete and permissive basis for cooperation between the Federal Government and State agencies responsible for administering the provisions of watershed district or other district legislation. These bills spell out the features of policy relating to local initiative and Federal-State-local cooperation which we believe can be administered effectively. We see in these bills an opportunity for the administration to take steps consistent with measures already taken or underway at local and State levels, such as the new watershed district legislation in Nebraska and Kansas.

Finally, this informal citizens' group believes that watershed programs are so important for resource maintenance and improvement, that basic policies and administration should be reexamined periodically and changes considered, particularly in light of recommendations made by local people.

Mr. McCONNELL. I would like to explain that this group of people we have here today is not an organization in any sense of the word. We are just people. We are people who have been working in our own localities on trying to get a job of watershed conservation and flood prevention done.

There are 16 of us here. I will give the secretary a list of those who are here. Last February some 25 of us came to Washington to meet with the President and with the Secretary of Agriculture, the Secretary of the Interior, the Budget Director, and General Sturgis. The purpose of our meeting at that time was to see if we could not get something started in this field at the Federal level that would fit in with the local effort of the type that we are putting on in Nebraska and that the people are working on in Kansas and Texas, Oklahoma, Georgia, and all throughout the country.

Our group is very much in favor of something being allocated in the budget this year so that some kind of nationwide pilot plant start can

be made on watershed work. We are very much in favor of the request that has been made by Representative Hope and Senator Carlson for an item of $5,100,000, which would permit a demonstrational start in some 48 or 50 small watersheds throughout the country.

The question then arises: What happens after you have a demonstrational start? We are not satisfied just to get some money in the budget to get some small watershed work underway. We would like to see a broad, comprehensive national policy emerge so that upstream conservation and flood prevention can be a permanent and planned part of an overall natural resources job.

Our committee has discussed this matter, and the gist of my testimony is to lend the strongest possible support to legislation such as H. R. 4877. I notice that I have called it Senate bill 877, but I am not certain whether Mr. Hope's bill has an actual companion measure yet in the Senate. But we are in favor of H. R. 4877 and whatever is the correct companion measure in the Senate, because we feel that it would be a step toward clarifying the responsibility and role of the Department of Agriculture in this field of flood prevention.

As I say, we are trying to do a job. In Nebraska we have new State legislation to enable the creation of watershed districts. In Kansas there is new State legislation so that the local people can take the initiative and organize and bear a part of the cost; and there is a crying need for a long-range Federal policy, Federal legislation which will parallel the action that is going on in the States and in the localities and which will make it possible for the Soil Conservation Service to make surveys in watersheds where the people want the surveys done; and to translate those surveys into actual Federal participation in doing the work wherever there is a responsible local agency that is competent to enter into contracts with the Federal Government and willing and able to bear part of the cost.

We are in favor of this legislation, not because it contains all the answers to a comprehensive Federal policy, but because it is a very essential first step in clarifying the responsibilities of the Federal agencies. There does not have to be a lot of jurisdictional battles. Flood prevention and conservation is a job which cuts across county lines. It cuts across State lines. It cuts across the responsibilities of many local, State and Federal agencies.

Unless there is a clear definition of the responsibilities of those agencies, we will have a continuing battle of agencies. This legislation, H. R. 4877, in our opinion very much helps to clarify the responsibilities of the Department of Agriculture and clarifies them legally in the right direction.

The direction in which our group is headed is stated in another document which we would like to introduce, which is the basis of our committee's having organized or gotten together in the first place, and that is where Fred Seaton comes in.

The CHAIRMAN. Thank you, Mr. McConnell, for your statement. We are very happy, of course, to have Mr. Seaton, former United States Senator and well-known Nebraska, Kansas, Colorado, and South Dakota publisher with us. We will be pleased to hear from you, Mr. Seaton.

STATEMENT OF HON. FRED SEATON, PUBLISHER OF THE HASTINGS (NEBR.) TRIBUNE, HASTINGS, NEBR.

Mr. SEATON. Thank you, Mr. Chairman. Mr. Chairman and members of the committee, my good friend, Congressman Curtis, was most gracious in describing my interest in this watershed work. But as the chairman of the committee knows, I must also confess to a sort of vested interest in the matter.

I was raised in Manhattan, Kans., and still operate a business there. Manhattan is located at the confluence of the Blue and the Kaw Rivers. My present location is in Hastings, Nebr., where the Blue heads up and starts out. Therefore I am on both the giving and the receiving end of the waters of that stream. And as the chairman himself well knows, the waters of that stream all to frequently run into the streets of the city of Manhattan.

I have here, and I should like to have the permission of the Chair to insert in the records of this hearing, a rather concise statement of the principles and procedures which outline the views of this National Informal Citizens' Committee on Watershed Conservation. With your permission, Mr. Chairman, I should like to offer that.

The CHAIRMAN. Without objection that will be made a part of the record.

(The statement of Hon. Fred Seaton is as follows:)

STATEMENT OF HON. FRED SEATON, PUBLISHER OF THE HASTINGS (NEBR.) TRIBUNE

The following is a statement of principles and procedures which in the view of the members of the National Informal Citizens Committee on Watershed Conservation should be translated by legislation and otherwise into national policy:

PRINCIPLES

1. The people living in each river basin should have the primary responsibility for development and management of water resources, soil conservation, land use, flood prevention, and flood control in that basin. They should exercise the initiative and assume the responsibility through State-controlled interstate agencies on interstate streams, through State agencies on major intrastate streams, and through local agencies such as watershed associations and soil-conservation districts on the watersheds of these streams.

2. Federal agencies should be responsible for providing technical assistance to interstate, State, and local agencies in planning river and watershed improvements, including land treatments and water management. The Federal Government should share with State and local agencies in the cost of these improvements in reasonable proportion to the National, State, and local interests involved, where the benefits therefrom exceed by substantial amounts the cost of the program or project.

3. Prevention and control of floods and land and water management and protection should begin and be emphasized most where the rain falls on each acre of land and should extend progressively through the branches, creeks, and rivers to the sea.

4. The effectiveness of all types of measures that contribute to flood prevention and control and improvement of land productivity should be evaluated in the light of needs in each river basin. This includes watershed conservation measures consisting of (1) proper use and treatment of watershed lands to retard runoff, to increase and maintain soil productivity, and to assure highest possible use of water resources; (2) small upstream structures for watershed stabilization and waterflow retardation on the branches, creeks, and headwater tributaries; river improvement measures such as levees, floodwalls, and major reservoirs; pollution abatement; floodplain zoning flood risk insurance; (3) stream channel improve-

ment and drainage outlets, particularly along coastal plains or tidewater streams; (4) small fresh water storage reservoirs or water conservation basins in the tidewater areas where salt content in water supplies is a problem; and (5) maintaining water storage within the soil structure as a means of stressing the beneficial use of water and encouraging the addition of organic material in the soils to increase its water-holding capacity during dry periods.

5. Development of water resources for the highest potential economic advantage for agriculture, industry, municipalities, and recreation is an important objective of watershed improvement. The enactment of modern water rights laws providing for maximum beneficial use of water is the responsibility of the States, as water is real property. Because of the need for similarity in water rights laws in achieving interstate watershed improvement, a Federal agency should, as requested, provide technical assistance to State and local governments in formulating sound State or local laws in the high rainfall belts to provide for sound water development programs protecting water investments.

6. Authorization of projects in which Federal funds are involved should continue to be the responsibility of the Congress.

POLICY AND ADMINISTRATION

7. Federal Government assistance in flood control on main river channels should be assigned to major construction agencies, such as the Corps of Engineers. Flood control reservoirs on main rivers within a State should not become the property of nor be placed under the control of the Federal Government. The States should be recognized as having ultimate control of these lands and waters, except where navigation is involved.

8. Federal Government assistance in watershed conservation in the interest of flood prevention should be assigned to the Department of Agriculture for (1) land-treatment measures; (2) watershed stabilization and waterflow retardation measures; and (3) development and protection of water resources for all interests. Objectives of the Department should not be limited to watershed stabilization, but should be basically an aim to bring about the maximum beneficial, long-time use of soil and water for economic stability and full development of each acre of agricultural land in the United States.

9. The primary objective and responsibility of the Department of Agriculture should be the protection and enhancement of agricultural resources—soil, water, forests, grass, and wildlife. But establishment of a watershed program by that agency also results in flood-protection benefits to urban and industrial areas, improvement of water supply for municipal, industrial, and recreational uses; and protection of roads, bridges, railroads, communication, and downstream reservoirs, as well as flood protection to agricultural lands along the flood plains of tributary streams.

10. Flood protection of urban and industrial areas should be a primary objective and responsibility of the Corps of Engineers. But planning for such flood protection should take into account the protection of urban and other values provided by an agricultural watershed program. Moreover, such protection by the Corps of Engineers should represent not the total protection necessary, but the difference between what protection the agricultural resource program provides to urban areas and the total protection necessary.

11. Water needs of municipalities, industry, agriculture, and recreation should be met to the extent possible from reservoirs built by any agency of the Federal Government in connection with watershed development and protection.

12. Where establishment of a watershed program does not provide the degree of flood protection desired and economically justifiable for urban and industrial areas, coordinate flood-protection works should be planned and installed by the Corps of Engineers or other major construction agency in conjunction with the watershed program.

13. Such major flood control construction projects should not be duplicated by the USDA installations, but such projects should be so located as to least impair agricultural values and attainment of the agricultural resource objectives. They should therefore be located only where the USDA, in fulfilling its responsibility for the protection of farm values, determines that agricultural values and potentials are low; except where the construction of large structures or local protective works may serve paramount interests such as water control or water supply immediately adjacent to an urban or industrial area.

14. In assisting State and local agencies, the Department of Agricultural should be responsible for evaluation of all agricultural and rural damages, wherever

located, including agricultural losses that would result within major reservoir areas. The Corps of Engineers should be responsible for evaluation of all urban and industrial damages and other nonagricultural flood losses. Evaluation of the benefits from watershed conservation measures and works of improvement should be the responsibility of the Department of Agriculture and the benefits from major flood control projects should be a responsibility of the Corps of Engineers. If the damages would be reduced by both watershed conservation and other flood control measures, the total effect of watershed conservation measures should be determined first, and the justification for additional flood control measures to protect urban, industrial, and related values should be justified by the additional nonagricultural benefits which they provide. State and local agencies should participate in and concur in evaluation of benefits prior to requests for Federal assistance in construction or installation of works of improvement. Where a major project of the Corps of Engineers involves silt from the watershed to the extent that it may be a factor in the economic life of the structure, Congress should require investigation of the silt problems by the Department of Agriculture. Recommendations for silt abatement should be accepted by the Corps of Engineers and carried out by the Department of Agriculture.

15. In determining priority for providing Federal assistance to State and local agencies in flood prevention and control, and soil and water conservation, primary consideration should be given to the willingness of State and local agencies to share, to the extent of their resources, in the cost of improvements and their maintenance. Lack of adequate local financing should not preclude local participation in this program where the public interest requires watershed protection and development.

16. In order to carry out national soil-conservation objectives and to accomplish the land treatment and upstream structural phases of the watershed conservation job on privately owned lands, all technical, financial, and other necessary assistance to State and local agencies should be made available by the Federal Government through a single agency of the Department of Agriculture. Such assistance should be contingent upon the State and local agencies meeting the requirements to be established by national policy with respect to cost sharing and maintenance. On Federal lands responsibility for watershed conservation should rest with those agencies having assigned jurisdiction for the care and improvement of such lands.

17. A construction agency such as the Corps of Engineers should be responsible for assisting interstate, State, and local agencies to plan and construct major flood-control projects, providing these organizations meet the requirements to be established by national policy with respect to cost sharing and maintenance.

Mr. McCONNELL. This statement that Senator Seaton has offered outlines the broad objectives that we feel could well become a framework of national policy. We have in our group some citizens from the States of South Carolina, North Carolina and Georgia who have a very direct and special interest in watershed work in those coastal regions; and they would like the opportunity to spell out what a comprehensive watershed program means in terms of the problems of the Southern States.

We have Mr. Bright McConnell of Augusta, Ga., who is active in the Savannah River project.

The CHAIRMAN. We will be happy to hear from you, Mr. McConnell.

STATEMENT OF BRIGHT McCONNELL, SECRETARY-TREASURER, SAVANNAH RIVER SOIL CONSERVATION DISTRICTS ASSOCIATION, AUGUSTA, GA.

Mr. McCONNELL. Thank you. Mr. Chairman and members of the committee: I am going to take just about two minutes here and briefly outline just a few of the highlight points we want you all to keep in mind. Then I am going to ask you to give these other 2 fellows the remaining time of our 5 minutes allotted.

The proposals briefly outlined are especially appealing to the people of the higher rainfall areas of the Nation because of the needs of the people and of the land and water resources in these humid sections. These needs in the high rainfall sections are brought about by the following conditions or situations. I will name just a few of them from my statement.

One, the widespread erosion damage on sloping lands and terrific losses of plant nutrients through both erosion and leaching. The lack of nutrients is evidenced by the heavy fertilizer requirements.

Two, through watershed development, soil conservation and improvement, and water development and management, the area has enormous potential for increased production to meet the needs of a rapidly growing national population.

Three, lands that slope fro.n the heaviest rainfall belts of the mountains to the seashores are ideal for and critically need watershed development.

Four, water-rights laws are largely primitive and must be modernized by the States before highest potential development of water resources and protection of investors in water improvements are possible.

I would like to call your attention at this point to the Clarks Hill Dam. It is only 22 miles above Augusta. It cost $78 million. It has been completed practically 2 years, and up to date there has been absolutely nothing done toward clearing the upstreams of the silt and the clay from settling in there. Anyone who has been in that section, or might be in that section, can see the red muds of North Carolina and the northern part of Georgia. This river runs from that point some 200 miles into North Carolina. That is rapidly filling with silt and clay.

The engineers admit that over a period of 100 to 150 years it will likely cause serious damage. We think that it will cause serious damage perhaps—and I have conferred with other engineers and congressional leaders here—in probably 50 to 75 years. That is a short time compared to the enormous cost of the dam.

In many eastern seaboard States all types of water users are beginning to review water-rights laws with a view to modernizing them to meet present and future needs of agriculture, interested municipalities and recreational interests.

Soil- and water-conservation work through soil conservation districts, created and managed by local landowners, exceeds that of any other section of the Nation. This indicates a great degree of willingness on the part of the people to accept responsibility for protection and improvement of land, water, forest, and wildlife resources.

I would like to ask the privilege now of filing my statement for the record.

The CHAIRMAN. Without objection, that will be done at this point.

(Mr. McConnell's statement is as follows:)

STATEMENT OF BRIGHT MCCONNELL, SECRETARY-TREASURER, SAVANNAH RIVER SOIL CONSERVATION DISTRICTS ASSOCIATION, AUGUSTA, GA.

The proposals contained herein are also especially appealing to the people of the high rainfall areas of the Nation, because of the needs of the people and of the land and water resources in these humid sections. These needs in the high rainfall sections were brought about by the following conditions or situations:

1. Widespread erosion damage on sloping lands and terrific losses of plant nutrients through both erosion and leaching. The lack of nutrients is evidenced by the heavy fertilizer requirements.

2. Through watershed development, soil conservation and improvement, and water development and management, the area has enormous potential for increased production to meet the needs of a rapidly growing national population.

3. Lands that slope from the heaviest rainfall belts of the mountains to the seashores are ideal for and critically need watershed development.

4. Water rights laws are largely primitive and must be modernized by the States before highest potential development of water resources and protection of investors in water improvements are possible.

5. In many eastern seaboard States, all types of water users are beginning to review water rights laws with a view to modernizing them to meet present and future needs of agriculture, industry, municipalities, and recreational interests.

6. Soil- and water-conservation work, through soil conservation districts created and managed by local landowners, exceeds that of any other section of the Nation. This indicates a great degree of willingness on the part of local people to accept responsibility for protection and improvement of land, water, forest, and wildlife resources.

7. Through deterioration of land resources and impairment of water quality through siltation, many local areas most needing watershed conservation work are least able to finance the operations. Recognition of this situation, together with appropriate financial help (on long-time loan basis) from the Federal government, is required.

8. Special problems of drainage and fresh water storage in coastal and tidal areas must be recognized and solved to increase productivity of farmlands and to bring new lands into economic production.

9. Urban and industrial flood damages are not spectacular on many streams as they are in some sections of the nation.

10. Flood prevention and flood control, therefore, have little appeal to many urban and industrial groups.

11. Flood damages on these same streams, however, are heavy on the agricultural flood plains of the upper reaches of these watersheds.

12. Many municipalities are desperately in need of more dependable or larger sources of water supply, and thus would support the water development and management phases of watershed improvement.

13. Rapid industrialization is requiring additional development of water resources.

14. Modernization of agriculture requires greater quantities and more dependable water supplies, particularly for supplemental irrigation during the frequent spring, summer, and early fall droughts.

Mr. McCONNELL. Now Mr. Clair Guess will say a few words, followed by Mr. Graham. Mr. Guess is from South Carolina.

The CHAIRMAN. We will be very happy to hear both of these gentlemen at this time.

STATEMENT OF CLAIR P. GUESS, JR., DENMARK, S. C.

Mr. GUESS. Mr. Chairman and members of the Committee: I have no prepared statement. I am from South Carolina and have been actively working with Soil Conservation Districts and farm problems for about 17 years.

I would like for you to think for just a moment that the requests that are here before this committee is a definite stage in the maturity of the development of this country's land and water resources which the Congress took under consideration some 17 years ago in making possible the Soil Conservation Service and other Federal agencies to assist the local people with their soil and water problems.

I think if you look now on the land as you go back over this past 17 years, you will see reflected a great deal of local interest and support which has carried out the fact that America is willing now to face its problems in soil and water conservation. Not only that, but to

devote these natural resources to their maximum beneficial usefor this country.

I think you will find that people now are beginning to see this problem similar to the time when we began developing a good public school system. When those problems faced America, people got together and somehow or other we have worked out one of the best educational systems of all countries.

Then again there were times when many of our rural areas and States were up to the axle in mud, and somehow or other we got together as good free-thinking American people and we solved our problems of transportation and highways.

I think you will find now a new developed leadership back in rural areas where people can band themselves together to help with a common problem. They do need, however, the full understanding and support of the Federal Government adding to this leadership and developing a system whereby the waters which frequently just run to the sea unimpeded can be developed into one of the best natural resources for equal utilization by municipalities, industrial interests and agriculture.

We have come to a stage in our development now where all these interests have to work together. There was a time, I think, when there was a lot of emphasis put on the two terms "city folks" and "country folks." But our problems cannot be divided in those categories much longer, when our civilization has gotten to the point it has.

I would like to say as far as Soil Conservation Service is concerned, we have seriously considered and have begun to develop adequate water laws to protect the interests of all water users—a thing that is kind of unheard of in the eastern seaboard States, but many other States now in high rainfall belts are becoming very interested in it.

With that active support on the part of the people and on the part of the States, I urge you to seriously consider the requests that are here before you today and make it a reality for the people who need it and want it so greatly.

The CHAIRMAN. Thank you very much.

STATEMENT OF J. T. GRAHAM, PRESIDENT, YADKIN-PEE DEE SOIL CONSERVATION AND FLOOD CONTROL ASSOCIATION, AND PRESIDENT, NORTH CAROLINA ASSOCIATION OF SOIL CONSERVATION DISTRICT SUPERVISORS

Mr. GRAHAM. I am J. T. Graham from North Carolina. I represent the Yadkin-Pee Dee watershed which flows right down through the heart of the State which you have heard about. Members of the committee, a number of times it has been my privilege to appear before the Public Works Committee and other committees with reference to this problem.

I have a statement prepared by the heads of the Soil Conservation Service of our section, in which it sets forth the needs of this part of the program with reference to stream channel improvement on the subtributaries of the watershed.

Along with it, we have a copy of local legislation that has been enacted in several of the counties down there, and which we stand

ready to work with, and appropriate the necessary funds to work with the appropriation which you set forth in your bill and which, by the way, our Congressmen and our people are very much in sympathy with and will yield our support beyond our limit almost to your bill, of which the number has been quoted.

Along with this I have an estimate on the back page prepared by the Soil Conservation Service of that section of the approximate cost which will guide you in making your appropriations.

The Soil Conservation Service and Mr. Brown here in Washington tell me that there is no section in this watershed where you could put on a project which would not only be demonstrating, but it would be laying the foundation of a permanent program that we hope will follow. Not a dime would be wasted; and whatever you did in this demonstration program would be a necessary expenditure anyway.

I will be glad to submit that to be put into the record, and we wish to yield our time to the other witnesses. We appreciate this portion of your time. We certainly thank you, sir, and assure you that whatever you and your committee see fit to allot to us, it will be greatly appreciated and we will do our part to match it in an intelligent and in a profitable manner.

I thank you, sir.

The CHAIRMAN. We thank you very much for your statement and your appearance before the committee. Your statement will appear in the record at this point.

(The statement of J. T. Graham is as follows:)

STATEMENT OF J. T. GRAHAM, PRESIDENT, YADKIN-PEE DEE SOIL CONSERVATION AND FLOOD CONTROL ASSOCIATION; AND PRESIDENT, NORTH CAROLINA ASSOCIATION OF SOIL CONSERVATION DISTRICT SUPERVISORS

My purpose for appearing before your committee is to speak in behalf of the upstream, farm by farm, approach to the soil and water conservation and flood prevention problem.

The Yadkin-Pee Dee watershed which I represent, is an area extending from Carroll and Patrick Counties in Virginia, to Georgetown, S. C.; containing 14,280 square miles or 9,139,000 acres, of which only the approximately upper one-half is proposed for a control program, and on which a detailed survey has been completed and approved for an action program.

I also represent the North Carolina Soil Conservation District Supervisor's Association which includes 98 of the 100 counties of the State, all of whom are vitally interested in this type of program.

My only income is from dairy farming. The positions I hold with the above organizations are honorary only. They pay no salaries or travel expenses.

I do not wish to give the impression that I am here pleading for a program of this type just for the watershed in which I live, or for my State only; but wish to see its benefits extended to our entire country wherever they are needed and where the people will cooperate in putting it into action.

It is my conviction, that the organized small watershed approach to soil and water conservation and flood prevention is the most practical and workable plan that can be devised. It supplies an incentive for cooperation; a concrete objective; a definite goal, that attracts the interests of not only the landowners, but of all the people living and doing business in the watershed. The farmers, the cities and towns, the industries, the State and local highway departments, and the railroads, are all concerned and will get together to carry out a program to which each contributes; and from which every citizen shares the benefits. This kind of cooperative effort has been demonstrated in several instances that I might mention.

It is not only our soils that need saving, and we are still losing too much of that precious resource; but with the ever increasing population growth and development of industries, water is becoming of increasing importance to our towns and cities for the expansion of industry. Our muddy creeks and rivers, carrying their loads of silt, are indictments of our boasted highly developed civilization and are

a constant reminder that neither we nor our forefathers have done very much about our two greatest natural resources, soil and water, except to abuse their uses and to exploit them. In fact, the advances of civilization and increase of population have aggravated the problem, and both soil and water resources have deteriorated under civilization's impact.

Why this is so, or that it should seem inevitable, is something that I have long pondered, and still cannot understand; that is, why an intelligent people will develop a high order of civilization in arts, science, engineering, philosophies, religion and neglect the most basic, the most essential two resources to their continued existence and prosperity—soil and water—which, if neglected, will destroy the vaunted civilization which neglected them. We need only to study the history of old civilizations, and to observe our present negligence to know that this is true.

We have, in my own Middle Yadkin Soil Conservation District in Davidson County, an excellent example of what can be accomplished, and in short order, by everyone getting together. The city of Lexington, N. C., has a 65 acre reservoir on Leonard Creek built in 1937, which was filling with silt at the rate of 1 percent a year, which is nearly 5,000 tons of soil being deposited annually from the 4,200-acre watershed. In 1951 the city officials, the soil conservation district supervisors, and the farmers got together, formed a watershed association, asked for the cooperation of the Soil Conservation Service and the State highway department, and made a working plan. The city agreeing to put up $5,000 for seed and fertilizer for seeding waterways; the highway department to slope and seed the road shoulders and embankments, and the Soil Conservation Service to make the soil surveys and conservation farm plans.

The project began in the spring of 1952, and within 6 months, 80 percent of the farms were individually planned; and the highway department has nearly completed its part of the job. The whole job, as planned, will be 90 percent complete this year. This has been done by the local people concerned. The farmers, the city, and the soil conservation district, having a common interest, got together and did the job. This local newspaper page explaining the project will give some idea of the local interest and participation.

Personally, I am against building big dams, unless they can be located where the impounded water does not cover valuable farming land, thus destroying it forever for farm production, and where the breaking up of old-established farming communities forces all the people to move out of the reservoir area.

A survey has been made by the Army Engineer Corps for a dam location on the upper Yadkin River, near North Wilkesboro, which if constructed, I am told, would cover up the greater part of Happy Valley, which has the best farming land in Wilkes and Caldwell Counties.

A hearing, to which I was invited, was held by the Army engineers on this proposed dam-building project this past March. The hearing was attended by 250 people, and I tell you, gentlemen, the people in the valley, don't want a dam, and they are sparing no effort to prevent its construction. The dam would protect some farming land and business property below from the periodic floods, but considering the cost of the dam, and the value and permanent loss of the fine farming land above the dam, I can't se any reasonble justification for it.

I cite this situation as an example in the watershed in which I live, but the same controversy over dam building, primarily for flood control and power production, exists in many other places.

I say, lets try the upstream approach, using every known and proven method and device of soil and water conservation on the land and small streams of the watershed. The results of such a program can be measured and evaluated within a reasonable length of time after the program is established; and then, if a large dam is needed and constructed, it will have a longer life, a more constant inflow of water carrying less soil and debris from the watershed.

Channel improvement (estimated costs per mile)

Dredged streams:	
Complete brushing and snagging	$650
Random brushing and snagging	250
Undredged streams:	
Complete brushing and snagging	750
Random brushing and snagging	300
Channel dredging and realinement	1,050

H. B. 1316—Chapter 1275

An act relating to a drainage district in Rowan and Iredell Counties to be known as Rowan-Iredell Drainage District No. 2

The General Assembly of North Carolina do enact:

SECTION 1. There is hereby created a drainage district in Rowan and Iredell Counties, to be known as Rowan-Iredell County Drainage District No. 2 and to be comprised of the following territory: All that area along and lying within 1 mile of the channel of Fourth Creek between the eastern boundary of the Iredell-Rowan County Drainage District No. 1 and the South Yadkin River; and all that area lying along and within 1 mile of the channel of Third Creek between the point where the Statesville-Charlotte railroad in Iredell County crosses Third Creek and the point where Third Creek joins Fourth Creek in Rowan County; and all the area in Rowan County lying along and within 1 mile of the channel of Second Creek and its tributaries.

SEC. 2. There shall be three commissioners for said drainage district. Two of said commissioners shall be appointed by the clerk of the superior court of Rowan County and one by the clerk of the superior court of Iredell County, all of whom shall serve for a term of 4 years, or until their successors are appointed. The terms of office of said commissioners shall commence on May 1, 1949, and quadrennially thereafter. Any vacancy shall be filled for the unexpired term by appointment by the clerk of the superior court of the county with respect to which such vacancy occurs. All acts done by said commissioners shall be done in the name of the Rowan-Iredell County Drainage District No. 2, and the vote of a majority shall control.

SEC. 3. Said district shall have full power and authority to sue and be sued in the name: Rowan-Iredell Country Drainage District No. 2, to make and to enter into contracts for the drainage of lands and all other contracts incidental thereto, to make assessments, and shall have all other powers of a drainage district as are provided by the general drainage laws of the State of North Carolina, which are not in conflict with the provisions of this act.

SEC. 4. The said commissioners shall meet and shall fairly assess the benefits to each separate parcel of land in the said district for the purpose of raising money to do all things necessary to drain the area within the said district.

SEC. 5. After the assessment is made by said commissioners, they shall mail a notice to the last known post office address of each property owner whose lands within said district are in Rowan County, giving the date of the assessment, the amount thereof, and notify him to appear before a meeting of said commissioners at the courthouse in Salisbury, N. C., on a date to be fixed in said notice, not later than thirty (30) days from the date of said notice, and object or except to said assessment, if any objection he has. If objection is made by any property owner whose lands lie within said district in Rowan County and an agreement is not made, he may appeal to the superior court of Rowan County, for said assessment in the same manner as is provided for appeals from assessments in the general drainage laws of the State of North Carolina. In case of an appeal by any objector, and the assessment is confirmed by the superior court, the said assessment shall be in full force and effect from the same date. After the hearing as above provided for, the said commissioners shall make and sign an order showing what assessments upon lands lying within said district in Rowan County theretofore made by them, are ratified, approved and confirmed.

Mr. MCCONNELL. We would like to call on Mr. Irving Hill, of Lawrence, Kans., president of the Lawrence Paper Co.

The CHAIRMAN. We are very happy, Mr. Hill, to have you here.

STATEMENT OF IRVING HILL, PRESIDENT, LAWRENCE PAPER CO., LAWRENCE, KANS.

Mr. HILL. Mr. Chairman, I bring you greetings from the watershed people of Kansas. They are proud to have you as their Representative, and they like your attitude in regard to watersheds.

I filed here a resolution by the watershed board supporting the general policies of the committee visiting you here. I think perhaps

if I can make any contribution to the situation it is to give you a little bit of the reaction out of my experience in learning about watersheds and developments.

I am a businessman. I have had to study and consult experts and all that sort of thing before I dared to speak. There are just 2 or 3 things that stand out that might be helpful.

A man named Sykes in England developed an organic farm. The productivity of that farm was such that the statement has been made several times if England followed that, they would not only supply all their own food wants, but they would have food for export. But for some reason or other, that individual farm movement does not grow extensively.

The watershed idea apparently has another angle. It has an appeal. People get the watershed fever. That, I think, is demonstrated by these representatives from the various parts of the country. It is demonstrated in Ohio. It has taken them 25 or 30 years, but during that time the State of Ohio has proceeded to where 66 out of 80 counties in Ohio—about 75 percent of Ohio—are now operating under watershed conservation districts, indicating that over a period of time they like that method of handling the resources of their State.

That is not just a fly-by-night instance. It is something that happened over a considerable period of time and with a lot of experience.

The second idea that has impressed me is the number of people and organizations. I have contacted them all over the country. I think there are upward of 200 organizations in the country which either are exclusively interested in natural resources or which have a department of natural resources working under them. That would not grow up in the country unless there was a sound fundamental idea back of watershed development.

It is the area of soil and water that can be operated in a complete and intelligent way, and it is spreading in that way not only in the watersheds themselves but in the organizations of the country.

I will touch that just a little differently. In trying to get information I contacted universities. A great many of them were doing work along this line. Paul B. Sears at Yale University has a school. It has grown very rapidly in the last few years.

With a law in Kansas authorizing local watershed development, we began to look for watershed advisers or watershed managers or watershed experts. I wrote a letter to Paul B. Sears in regard to it. I got a reply that they are just now considering and expect to open a department for the graduation of watershed managers. That probably is just about 4 years away before watershed managers would be available to Kansas or the South or other places.

There is outstanding work and growing work being done at Michigan and Ohio Universities, and I could name a number of others. I know our Kansas, Missouri, and Nebraska institutions are all doing work along this line, all infected by the soundness and broadness of the watershed matter.

The final thing that impresses me is the lack of expert executives, people with management ability. For instance, we have 15 to 20 volunteer organizations of watersheds in Kansas. They are now proceeding to organize under the law. We need somebody pretty badly to come to Kansas who has the experience and the wisdom to

help us avoid mistakes and to get the best final result across 25, 50, or 100 years. They are rather difficult to locate.

Frankly the men with the experience along that line in soil conservation and in the work of the Department of Agriculture are the men best informed and the most able to render that kind of assistance at the present time.

One experience we had, in consulting a hydraulics engineer he knew hydraulics but he did not know watershed. After 2 or 3 months of supplying him with literature and books and magazines and whatnot, he became watershed minded. So, as he thinks of hydraulics, he also thinks of the whole watershed

That can be done, but that takes time; whereas the Department of Agriculture now not only has these men who are familiar with it, but also who know the farming problems. They know the whole story in connection not only with the headwaters, but of the bottom land where cattle are fed and are pastured on the upland. They know that story. So, it seems to me, your approach along that line, to center this work as much as you can in the Department of Agriculture, is not only politically but economically sound. Thank you.

The CHAIRMAN. Thank you very much, Mr. Hill, for your statement. You have given us some things to think about as far as the future is concerned.

Mr. MCCONNELL. We have Mr. Henry Blake, of Topeka, the publisher of the Capper publications. He is a member of our group and is represented by Mr. Grant Salisbury, who has no prepared testimony. So we will go on to the State of Texas and call on Col. W. B. Tuttle, of San Antonio, who has a beautiful example down in San Antonio of local initiative in this field. Colonel Tuttle.

STATEMENT OF W. B. TUTTLE, SAN ANTONIO, TEX.

Mr. TUTTLE. Mr. Chairman and members of the committee: I am W. B. Tuttle of San Antonio, Tex. I am the chairman of the former San Antonio River Canal and Conservancy District, now the San Antonio River Authority by act of the legislature. That district was created by the legislature. It is governed by a board of nine directors who were appointed by the Governor. Their terms overlap over a long period of years.

Many years ago I was one of the owners, secretary, and most of the time operating director of the Espedo Land and Irrigation Co. which has a large ranch below Laredo on the Rio Grande River. There I had some experience in floods and irrigation work. Later on in 1921 we had a great flood in San Antonio where I then lived. That flood devastated the business section of the city. It came from the Olmos Creek on the north side of the city. Following that flood I was appointed the chairman of a board of local engineers who designed and prepared the specifications for a dam across the Olmos Creek, which cost about $1,500,000, which was paid for out of the local taxes of the city.

Since that dam was built, there have been no devastating floods from that area, although there have been threats and serious danger of floods from other areas adjacent to the city.

In 1937 I was appointed the chairman and member of the board of the San Antonio River Canal and Conservancy District and became chairman of that board; and I have been chairman from that time to

now. The Corps of Engineers made a study of the San Antonio River looking toward flood control among other things; and they turned in a report about 2 years ago in which they recommended flood control channels and enlargements of the waterways in the city of San Antonio and in the city of Kennedy in Karnes County.

They did not recommend any major dams on the San Antonio River, on the main river. We then turned to the Soil Conservation Service and suggested the study of the creation of small dams on the tributaries in our district. The San Antonio River area is about 4,000 square miles in extent. The Soil Conservation Service indicated favorable action, and at one time we expected them to get work started. That was just before the Korean war.

When the Korean war came on they notified our district that the funds which might have been available had been frozen. We then asked the Soil Conservation Service how much it would cost to make the preliminary surveys and reports on a small dam proposition upstream water control in that area. They said about $75,000.

Our district then put up $75,000 in trust in the Treasury of the United States to pay for that survey. The survey has been made and is now practically complete. The report is now before the Department of Agriculture. That survey cost about $55,000, and the Department of Agriculture turned back to us the unexpended balance.

That fund came from moneys which were transferred to the counties of Bexar, Wilson, Karnes and Goliad something over 2 years ago, being State funds which would ordinarily have gone to the State, but which were turned over to the district to cover the interest of those counties.

The Soil Conservation Service has done a splendid job in preparing the plans for this district; and that plan, I understand, is being considered in connection with a report from this committee. That plan insofar as our district is concerned, a portion of it, covers small-dam proposals on the Calaveras Creek at a cost of about $500,000; and small-dam proposals on the Escondido Creek in Karnes County at a cost of about $9,600, I believe.

Our board of directors wish to recommend highly that these two propositions be carried through at this time because both of them are major hazards. Those two creeks are major hazards in the flood areas on the San Antonio River.

I have here a brief report covering what I have given, which I would like to hand to the secretary. I want to add this, that the voters of Bexar County, which is the largest county in the district, in which San Antonio is located, at an election held about 2 years ago authorized the constitution of a 30-cent tax, which we could do under the laws of the State. Fifteen cents of that tax goes to farm-to-market roads and 15 cents goes to flood control; and that is another source of revenue that we have now from the taxpayers of Bexar County.

The CHAIRMAN. Thank you very much. Your statement will be made a part of the record.

(Statement of W. B. Tuttle is as follows:)

STATEMENT OF W. B. TUTILE, CHAIRMAN, SAN ANTONIO RIVER AUTHORITY

I am W. B. Tuttle, chairman of the former San Antonio Canal and Conservancy District, a State agency, whose directors are appointed by the Governor of Texas. The name of this district has been changed by an act of the 53d Legisla-

ture of Texas to the San Antonio River Authority. I have been chairman of the board of directors of the district since soon after its creation by the Legislature of Texas in 1937. I am a professional engineer, holding license No. 33 in the State of Texas.

I was for many years secretary and most of the time acting as managing director of the Espedo Irrigation Co. which owned a 16,000-acre farm and ranch tract on the Rio Grande River a short distance below Laredo, Tex.

After the San Antonio River flood in 1921 I served as chairman of the board of engineers which recommended the construction of a dam across the Olmos Creek in the northern part of the city of San Antonio. This dam was built without Federal aid at a cost to the taxpayers of San Antonio of $1,571,131; and no damaging floods have come down the Olmos Creek since it was constructed.

In 1946 I assisted in the organization of the Alamo Soil Conservation District No. 330 which takes in all of Bexar County, Tex., and I was the first chairman of the board of supervisors of that district.

I have had a broad experience with soil and water conservation problems and I have had practical experience in carrying out this class of work.

Under a directive of June 27, 1946, the Chief of Engineers ordered a flood-control study of the San Antonio River and as chairman of the San Antonio River district I cooperated fully with this work.

I have been in close contact for a period of years in the preparation of all reports for flood control for the San Antonio River and major tributaries; and I concur in the programs which have been developed by the Corps of Engineers and Soil Conservation Service for flood control for the San Antonio River.

San Antonio River Authority, formerly the San Antonio River Canal and Conservancy District. Statement on flood control projects in the San Antonio River drainage area

On August 8, 1952, the Chief of Engineers sent in a report to the Secretary of the Army on a study of the Guadalupe and San Antonio River Basins which among other things recommended flood control projects in the city of San Antonio at an estimated cost to the United States of $12,906,900 for construction and $7,528,000 to local authorities.

This flood-control project is set up entirely for channel straightening, deepening and widening, and the report does not recommend any flood control dams on the main channel of the San Antonio River.

The report on this project has been in the Bureau of the Budget for many months.

When it was found that the Corps of Engineers did not recommend any flood control dams on the main channel the district suggested the construction of small dams on the tributaries of the San Antonio River as an alternate flood control. The regional office of the Soil Conservation Service indicated favorable action on this project and it was understood that funds were available to make the preliminary survey but the war in Korea started and the district was advised the funds were no longer available. The district was also advised the estimated costs of the survey and report would be $75,000. The district offered to pay this cost and under date of March 1, 1951, a trust fund agreement was made between the San Antonio River Conservancy District and the Soil Conservation Service of the United States Department of Agriculture under which the district agreed to deposit the sum of $75,000 with the Treasury of the United States to be available for the Soil Conservation Service for meeting field expenses, salaries and other expenses in connection with the survey.

At the board of directors meeting on March 16, 1951, a motion was passed which ordered that the $75,000 provided for in the contract be transmitted to the Treasury of the United States at once through the regional office of the Soil Conservation Service at Fort Worth, Tex. The $75,000 was then paid in to the Treasury of the United States.

The survey was started and a report on the survey entitled "program for runoff and waterflow retardation and soil erosion prevention" was published on November 19, 1952. This report recommends that the project at an estimated cost of $9,295,000 to the Federal Government, $949,000 to other public agencies, and $2,057,000 or its equivalent to local sources making a total estimated cost of $12,301,000. This report is now in the Department of Agriculture.

The cost of the survey and report was $55,060.84 and the remaining balance which had been deposited in trust being $19,939.16 has been returned to the San Antonio River district.

The board of directors of the San Antonio River Authority (San Antonio River Canal and Conservancy District) have reviewed the 1952 survey report on the San Antonio River watershed made by the Soil Conservation Service and the board fully approves this report. The board is very desirous of having prompt action on two flood projects, one on the Calaveras Creek in Bexar County and one on the Escondido Creek in Karnes County so that these developments will demonstrate to the farmers and ranchers what can be done toward flood control and water and soil conservation through such projects and the accompanying work by local landholders.

In summary our board of directors requests the immediate adoption of the plan suggested by the Soil Conservation Service and recommends actual appropriation of funds to complete the work in the two projects mentioned above in the ensuing year.

Mr. McCONNELL. We have as one member of our group Mr. Truett Smith, a banker of Wylie, Tex., and one of the prime movers in the Trinity watershed program down around Dallas.

The CHAIRMAN. We will be glad to hear from you, Mr. Smith.

STATEMENT OF TRUETT SMITH, WYLIE, TEX.

Mr. SMITH. Mr. Chairman and members of the committee: We represent the East Fork Association, which is a watershed of 840,000 acres in the upper Trinity River which is 1 of the 11 watersheds authorized by Congress for carrying out the USDA flood-prevention program.

We have a complete survey made of our watershed, and also have a major reservoir located approximately in the center of our watershed, which will be completed this summer. It is being constructed by the Corps of Engineers. This area is subject to frequent floodings, as many as 4 and 5 times a year, with an annual average flood damage that runs into the millions of dollars.

If the upstream program in this area could be completed, 75 percent of this flood damage could be prevented. Agriculture production could be increased by over 20 percent, and the sedimentation of this major reservoir would be reduced by approximately 50 percent. Local interests have contributed greatly to the progress of this program so far. Organizations of farm operators, landowners, and businessmen have constantly worked with and through the soil-conservation districts in carrying out this flood-prevention program and also the practices upon the land.

Fourteen subwatershed associations have been organized and are functioning in the East Fork area; and in this particular area voluntary easements have been secured and furnished to the Government without cost to the Government on 31 detention reservoir sites.

There has been accomplished in this Upper Trinity area 29 creek watershed flood prevention work plans which have been developed covering approximately 60 percent of the Upper Trinity watershed. Forty-two detention structures have been built or are under construction at the present time. Ten gully stabilization structures have been completed, and 31 sediment control structures have been completed, plus the acceleration of the land treatment program upon the entire watershed, with an annual average benefit of $7.29 to every $1 of cost.

We have given these facts and figures to show that this type of program will work. It is working. However, it needs to work much faster, not only in our area, in our watershed, but on additional water-

sheds throughout all parts of the country. We are already receiving many benefits as a result of the completion of these structures which have been built within the past 2 or 3 years, and therefore we favor the general type of legislation proposed in the Hope bill and also in like legislation which is being or will be introduced in the Senate as a means of furthering this program.

It is a splendid program. It will work. It just needs to work faster. Thank you, sir.

The CHAIRMAN. Thank you, Mr. Smith.

Mr. MCCONNELL. Mr. Hope, that is all that we have to speak for our group. There are other members here that I would like to have introduce themselves, if they would. Mr. John Bird of the Curtis Publishing Co., Philadelphia. Mr. R. C. Wedemeyer of Oklahoma, who is active in the Ouachita project. Don Anderson of Honey Creek, Iowa, has a prepared statement, which is the last one.

STATEMENT OF DON ANDERSON, HONEY CREEK, IOWA

Mr. ANDERSON. Mr. Chairman, members of the committee; I thought for a minute that Mr. McConnell maybe had eliminated me from his group. I am a farmer from western Iowa, and the things I want to talk with you a few minutes about, and the things that my statement cover, are based on my own experiences as a farmer and cooperator in a soil conservation district; on a number of years' experience as a member of the ACP committee in my own country; and a member of the soil conservation district governing body of my own soil conservation district.

I also at the moment am chairman of the water management committee of the National Association of Soil Conservation Districts, and I think speak for this phase of the program representing soil conservation districts.

I would like to point out just a little bit the importance of a watershed program as a part of the permanent long-range program of the Department of Agriculture. In our soil conservation district work we are able to do a good many of the on-the-farm permanent conservation practices; but we find an area where the farmers cannot quite afford to apply some of the protective measures that are needed—some of them gully control and some of them in drainage. This area also is not being serviced by the programs of the Corps of Engineers and the major construction agencies.

I think we could establish a watershed program under the Soil Conservation Service that would provide assistance with these problems, whether they be gully control or drainage, that are beyond the capabilities of the farmers and ranchers to complete. It would be necessary that it be available to all of these eligible subwatersheds and not tied to specific watersheds, as has been the situation under the present Flood Control Act.

These problems affect more than one farm; and the leadership and financial and technical assistance that this watershed program could give would be a real incentive to the farmers and ranchers in any of these subwatersheds to cooperate and solve these problems.

This assistance was made contingent on the farmers and ranchers having virtually completed the on-the-farm practices on their farms so far as it was financially possible for them to do. We would have a

program that would provide a real incentive to apply conservation on the land, and would develop a spirit of competition between the subwatersheds in the districts and counties in getting their sub-watershed eligible for these further protective works. It would have more influence in getting conservation on the land than probably the present payment program.

I think these priorities for the subwatershed assistance could and should be determined by local groups. It could be by the Agricultural Resources Council or a similar local group. This kind of program would not interfere with the programs of the Corps of Engineers or the Reclamation Service. It could and should be carried on as rapidly as finances and local cooperation will permit, I think prior or concurrent with construction works of the major construction agencies.

As chairman of the water management committee of the National Association of Soil Conservation Districts, I have found a tremendous interest by the people in the watershed groups throughout the country, both the rural and urban groups. They are looking for a program of flood protection and resources development under which they can make a real and a proper contribution. I am sure that the proposed watershed development program is one of the key foundation stones in a long-range program for protection and development of our land and water resources.

I want to thank you, Mr. Chairman, for this opportunity to appear before your committee. I would like to offer this statement for the record of the committee and also the minutes of the resolutions passed by the water management committee of the National Association of Soil Conservation Districts at their conference in Omaha on February 4, 1953.

The CHAIRMAN. That will be made a part of the record.

(The documents are as follows:)

STATEMENT OF DON ANDERSON, HONEY CREEK, IOWA, MEMBER OF THE NATIONAL INFORMAL CITIZENS COMMITTEE ON WATERSHED CONSERVATION

I want to point out to you the importance of the watershed type program as a part of the permanent long-range program of the Department of Agriculture.

Under the present programs, considerable amounts of money are being spent for payments under the Agricultural Conservation payment program, and even greater amounts are being spent for construction of dams and levees on the major streams. Between where these two programs operate there exists a problem that is, in my opinion, just as vital when we consider the total conservation and maintenance of our soil and water resources. This area needs protective measures. The cost of these, in many cases, is beyond the financial abilities of the farmers who occupy the land to afford, and too small and scattered to be practical for construction programs by a major construction agency. These protective works, to me, are really not an expenditure but in reality an investment in the future of America, and unfortunately the longer time elapses before these measures are installed, the greater the cost is going to be. During these intervening years the gullies are going to continue to eat into our available farmland at an ever-increasing rate, and they also will continue to dump tremendous amounts of silt into the drainage ditches in the lower lands and into the major streams. The cost of removing this silt from the drainage ditches and rivers over a period of years would certainly cover a large portion of the cost of installing these protective works in the subwatersheds.

I think it might be helpful in this discussion to consider the possibility of utilizing some of the present agricultural conservation program funds for permanent practices in a watershed program. Let us consider the present program and the way it operates at the county or soil conservation district level. During the past few years, in most all of the counties, the agricultural conservation

program committees and soil conservation district governing bodies have met together for the purpose of developing a program for the county that would provide for more conservation for dollars spent in the agricultural conservation program payments and for better working relationships between the agricultural conservation program and the soil conservation district program. Almost without exception these discussions revolved themselves into a situation something like this: In most areas there would not be requests for payment for permanent conservation practices such as terraces, contouring, grassed waterways, and drainage systems, and if there were enough requests there would not be available enough technical assistance to supervise the laying out of these practices. After arriving at these conclusions the agricultural conservation program committee in most cases determined that recurring practices, such as plowing under green manure crops, summer fallowing, application of limestone and phosphate, would have to be approved in order to use up, if you please, the agricultural conservation program allotment for the county. As a result of these practices being eligible for payments the total amount of practices that could be approved and carried out at the approved rate of payment would far exceed the moneys available for the agricultural conservation program payments in the county and as a result the payments were all scaled down to the extent that in some cases only 50 percent of the approved rate of payment was made for the permanent conservation practices carried out. I would also like to point out that on many farms all of the permanent conservation practices that can be carried out by the farmers and ranchers have been completed and the continuation of conservation payments on these farms, in my opinion, cannot be justified.

My proposal in this matter would be to establish a watershed program under the Soil Conservation Service to provide assistance with these problems, whether they be gully control or drainage, that are beyond the capabilities of the farmers and ranchers to complete. In order to make it practical to work this program with the agricultural conservation program, it would of necessity have to be available to all eligible subwatersheds and not tied to specific watersheds as is the situation under the present Flood Control Act. Most of these problems would affect more than one farm. The leadership and financial and technical assistance offered by the Federal Government would certainly be considerable incentive to the farmers and ranchers in any subwatershed to cooperate and solve this mutual problem.

This kind of program would be a drastic change from the present agricultural conservation program policy of paying every farmer and rancher every year for something. In many cases these payments are at present only token payment made in the name of conservation.

If this assistance in the watershed program was made contingent on the farmers and ranchers having virtually completed the on-the-farm conservation practices so far as was financially practicable, we would have a program that would provide a real incentive to apply conservation on the land. There would develop a spirit of competition between the various subwatersheds in any district or county in getting their subwatershed eligible for these further protective works that would have more influence in getting conservation on the land as the present payment program.

The priority of the various subwatersheds for assistance could be determined by the local agricultural resources council or similar local group. Under this kind of program agricultural conservation program funds that were not used by farmers and ranchers for permanent conservation practices could be used to supplement the moneys available for watershed development. Under this kind of program everyone wouldn't be paid every year. I'm sure the farmers and ranchers would be agreeable to having Federal moneys spent for things they cannot do themselves, rather than for many things they can and should do for themselves.

I would like to compare this program to the program, for instance, of improving our road system. When we undertook to gravel the roads in our area we graded and graveled the roads as funds permitted, mile by mile. We didn't just sprinkle a little gravel here and there on all the roads. The proposed program I have described would provide a common meeting ground where all the groups interested in this problem could make a contribution, whether it be Department of Agriculture in assistance to soil conservation districts, watershed program, agricultural conservation program, extension program, Forest Service, the State government, the county government, watershed groups, or interested farmers and ranchers.

This program would not interfere with programs of the Corps of Engineers or the Reclamation Service. It could and should be carried on as rapidly as finances

and local cooperation permit, in my opinion, prior to or concurrent with the construction works of the major construction agencies.

In my capacity as chairman of the water management committee of the NASCD, I have found a tremendous interest by the people in the several hundred watershed groups throughout the country. These people, both rural and urban, are looking for a program of flood protection and resource development under which they can make a real and proper contribution.

I'm sure the proposed watershed development program is one of the key foundation stones in the long-range program for protection and development of our land and water resources.

REPORT OF WATER MANAGEMENT COMMITTEE, NATIONAL ASSOCIATION OF SOIL CONSERVATION DISTRICTS, SEVENTH ANNUAL CONVENTION, OMAHA, NEBR., FEBRUARY 1953

This committee confirms the past policy of the National Association of Soil Conservation Districts as follows:

1. Recommends that a rapid and complete upstream watershed program be carried out and that this program should precede or be concurrent to downstream development.

2. Urge the planning of Federal, State, local and other water use and control programs and contributions on the basis of water sheds or basins in the following order:

(*a*) Land treatment fitted to the area.
(*b*) Stabilization of subwaterways, small stream courses, and contributing areas.
(*c*) Stabilization of main streams.
(*d*) Works controlling and utilizing water runoff.

3. Urge mutual cooperation of all agencies in water use and control programs with soil conservation districts.

4. Recognize the development and participation in sound water management plans as a district responsibility.

5. Recognize the inner-relationship of the conservation problems involving water and the living resources.

6. Urge analysis of water supply demands and a continuing inventory of available sources, both surface and ground.

7. In determining priority for providing Federal assistance to State and local agencies in flood prevention and control, primary consideration should be given to the willingness of State and local agencies to share in the cost of improvements and provide for their maintenance.

8. In order to carry out national soil conservation objectives and to accomplish the land treatment and upstream structural phases of the water shed conservation job on privately owned lands, all technical, financial, and other necessary assistance to State and local agencies should be made available by the Federal Government through a single agency of the Department of Agriculture.

9. Watershed programs should receive a more realistic share of whatever total Federal funds are to be appropriated for land and water resource development.

10. The President should recommend to the Congress new legislation establishing uniform standards for Federal cost sharing in planning installation and maintenance of each class and type of flood prevention and control measures.

We recommend the following steps be taken immediately:

1. To appoint a citizens' committee advisory to the Secretary of Agriculture on watershed conservation and flood-prevention programs, to report and advise on: (*a*) Desirable objectives, procedures, and organization within the Department to further such programs, and (*b*) the Department's relation to other Federal, State, and local groups having responsibilities in conservation and watershed activities.

2. To assure that, on any committee or commission advisory to the Secretary of Agriculture, there be full representation of conservation and watershed interests.

3. To immediately readjust the 1954 budget of the Department of Agriculture, without increases, to provide for assistance in flood prevention and related land treatment in small watersheds upon application of local agencies and certification of their willingness and readiness to participate in the installation and maintenance of improvements under such rules as the Secretary of Agriculture should establish.

In carrying forward the idea that soil conservation districts should sponsor the formation of and cooperate closely with watershed associations, jointly working out mutual problems and aiding in watershed development. The NASCD urges and invites all other groups in accord with the foregoing resolutions to join with

us in taking whatever steps are practical in getting the points included in this report adopted as a national policy.

The committee requests that copies of these resolution be sent immediately to President Eisenhower, Secretary Benson, all Members of Congress, and the officers of the five-hundred-odd watershed groups throughout the country.

The CHAIRMAN. Do I understand, Mr. McConnell, that concludes the list of witnesses of your group?

Mr. MCCONNELL. Yes, sir.

The CHAIRMAN. The committee has not had an opportunity to interrogate any of these witnesses. If there are any questions, we have some time now. If the members of the committee wish to interrogate any witness, just name the witness and we will take some time to do that at this time.

Mr. THOMPSON. I would like to make an obesrvation, if I may, Mr. Chairman. It is not in any sense a question. But I see a neighbor of mine among the witnesses, Col. W. B. Tuttle, of San Antonio. I would automatically assume that anything Colonel Tuttle was alined with was excellent, and certainly his associates would be excellent.

Knowing him for many years, I know that he is a very patriotic and public-spirited citizen and a very careful student of any subject that he undertakes. So I assume that this is a top-side outfit.

Mr. TUTTLE. I would like to add one little thing, and that is that I helped organize the Alamo Soil Conservation District in Bexar County. I was elected by the farmers as one of the board of supervisors. You had to be a qualified farmer and rancher to do that, and I acted as the first chairman of that board of supervisors. So I have had plenty of experience in soil-conservation detail work.

The CHAIRMAN. Are there any other questions? If not, we desire to thank all of those who have appeared this morning for the contribution they have made to the information of the committee.

At this point in the record we will insert the statement of Mr. Harry D. Strunk, as requested.

(The statement of Harry D. Strunk is as follows:)

STATEMENT OF HARRY D. STRUNK, BEFORE THE HOUSE AGRICULTURE COMMITTEE

Chairman Hope and members of the committee, I am Harry D. Strunk, of McCook, Nebr. As president of the Republican Valley Conservation Association, may I invite your attention to some problems present in our area? The hearings which your committee is today holding, dealing with all phases of soil and water conservation, are of tremendous importance to project-sponsor groups such as ours throughout the entire West. I commend you committee for taking the time and pains necessary to investigate this subject, and hope earnestly that your findings will provide further proof of the need for a definite program of action.

Without doubt, the bill which you have personally introduced, known as the Hope bill, H. R. 4877, and possibly other proposals currently before your committee, will go far toward correcting serious deficiency throughout the Great Plains and other areas enjoying marginal rainfall.

The Republican River and its tributaries comprise rather a large watershed in eastern Colorado, northwestern Kansas, and southwestern Nebraska. Those of us who have lived here all our lives will never forget the alternate droughts and floods which this area has experienced. And of course, the very worst flood of all, in our lifetime, was in 1935. That tragedy took 112 lives, as well as causing property damage running into millions and millions of dollars.

No more graphic picture of that catastrophe could be given you than to quote from a statement of our Congressman, Hon. Carl T. Curtis, which he made before the House Committee on Flood Control in the 76th Congress. Mr. Curtis said, in speaking of the flood in the Republican River: "I shall never forget that sight.

A great mass of angry water with all of its roar made a most impressive sight. A great concrete highway bridge was destroyed, railroad tracks were swept away. In the river you could see houses, barns, and other buildings floating by. Heavy machinery, such as farm tractors, were carried away or crushed as if they were tin cans. Livestock bellowed as they were carried to their death."

That was in the spring of 1935. But the vagaries of our weather are such that that fall we witnessed a drought, and many of our crops were scorched and burned. That experience added to the general depression which had seized agriculture and other elements of business in America in the early thirties. In an attempt to rehabilitate our agriculture, a generous Federal Government disbursed loans and grants in 9 counties of our watershed lying within Nebraska, totaling more than $25 million. This was between 1933 and 1940. Presumably, the sums were to assist farm families in restoring their agricultural operations, and guarding against recurring floods and droughts. But the job isn't that easy. Subsequent years have witnessed repeated droughts and floods, and we all must admit, in retrospect, that expenditures like that $25 million are mere palliatives. They provide no permanent long-term relief, or protection, from nature's extremes.

Much of the testimony which will come before your committee, in connection with your current hearings, should come from those fine technical people who so ably staff the Soil Conservation Service. I would like to call up one of their estimates to reveal to you the seriousness of the 1935 experience in our watershed. Soil Conservation Service officials checked carefully combined erosion and flood losses by the 28 counties lying in the Republican watershed in our basin between 1930 and 1935, and discovered a reduced valuation equaling $175,532,543. They found this to be one-third of the total estimated value of our farm real estate at the beginning of that decade. And this vast sum did not include any of the decreased production of which the lands are capable when erosion is checked and supplemental water applied to the land.

In 1939 the unicameral Legislature of Nebraska memorialized Congress to recognize the Republican Valley control and water utilization problems as the State's No. 1 headache. This was significant, because it revealed the fact that our area was not just an isolated section of the State, suffering from some local emergency. Memories are short, however, and I am quite sure that there is no single member of your committee today, except possibly Mr. Hope, who is a neighbor of ours, who will recall the fact that our State legislature regarded us so recently as the State's No. 1 problem area. And, frankly, we will continue to be a problem area until every possible type of soil and water conservation, of which our technicians are capable, is introduced to the lands in our watershed.

Now we who live in that section have not merely set ourselves up to plead for aid from others. In 1940 we formed our association. It has continued to represent the important cities and town throughout the watershed, and to seek at all times the most practical type of restoration and rehabilitation for the entire watershed. And the very first project which we undertook was to organize all the counties in the immediate vicinity of the Republican Valley itself into soil conservation districts, under State statute. This was one way in which our farmers and townspeople could combine forces to help ourselves. And we have been proud indeed, in the intervening years, of the splendid achievements of those soil districts.

For instance, in 1952—last year—Paul Evans, area conservationist, Soil Conservation Service, estimated that more than 100,000 miles of terracing were completed in the five southwestern counties in Nebraska which he supervised. A total of 175,000 trees and shrubs were planted. Between 3,000 and 5,000 acres of grassland were seeded, with special attention being given to individual landowners in such matters as land leveling. In these and other ways, we construe it to be our obligation to do what we can to help ourselves, and to improve the terrain so as to minimize the annual hazard from droughts and wind and water erosion.

It was largely born of our intense interest in the soil-conservation program which, in 1948, caused us to recommend strongly to our Senators Butler and Wherry, and to Congressman Curtis, that they do what they could to insure the fact that adequate funds were made available to the Department of Agriculture for extensive basinwide surveys. The Congress that year ultimately appropriated $500,000 for that purpose. The surveys were made, and they have been filed away ever since. I propose that your committee bring these out into the open, and study them carefully with a view to inaugurating construction in those subbasins where it will prove to be in the interest of the public as a whole.

As we understand it, the survey reports produced a list of projects which might have provided a 30-year program of work, estimated at more than $2 billion. Involved were upstream flood-water-retardation structures, sediment-retention structures, floodways, channel improvements, and diversion dams and dikes. All of this work could have been accomplished in the small watersheds as authorized under the Flood Control Act of 1936.

Although Federal funds are normally involved primarily in the development of flood-control facilities, Nebraska's flood experience has been so serious in recent years that even the State legislature has been obliged to move into that field and provide funds. Just last year, the legislature appropriated $500,000 for out-and-out flood relief. The unicameral was called into special session by Governor Val Peterson after the disastrous flood hit the Missouri and its tributaries. Money allocated was merely for the most basic rehabilitation on roads, bridges, public utilities, schools, and so forth. But such a sum did not go far toward repairing the $43 million in damage which the Corps of Engineers estimated was the damage in the Missouri and its tributaries last year alone.

When are we going to take a little longer view of our permanent values of soil and water? Too often there is a view that flood control, and soil and water conservation, can be turned on and off, depending upon the convenience of the Congress. I realize full well that your committee today, and the entire Congress, is struggling with an extremely difficult problem of economy. It is imperative that you minimize any expenditures which can be safely deferred. But I defy even the most stringent economy advocate to show how it has been prudent, or wise national policy, to hold in abeyance all flood-control and soil-conservation activities turned up by the special survey of 1948–49. We must change our procedures, to allow of more long-range planning. It is not enough to move into a stricken area, when floods occur, and to dispense State and Federal aid, to move out livestock, and to move in emergency feed. An enlightened Federal policy must guide our way toward checking the potential damage which rains and winds can bring to the slopes along our streams which are exposed to annual erosion.

It is not for the purpose of comparing our need with that of friendly nations abroad, that I would speak out at this juncture. But I do feel that it is significant that out of current appropriations, provided by the Congress, flood-control programs have been financed abroad in recent years. I am informed that in India, the Dam-O-Dar Valley is undergoing very substantial development, entailing ultimately flood control and irrigation. I certainly contend that if economy pressures are not great enough to compel us to forego this type of expenditure abroad, it will be hard for us in southwestern Nebraska to understand why such expenditures may be not undertaken here at home.

Like other areas in the West, especially in the Great Plains, we feel that we undoubtedly have numerous tributaries which would be ideal for development by the Flood Control Section of the Department of Agriculture. Many of those areas must have been investigated in 1948–49. We recognize the Department of Agriculture as the third member of a partnership, including the Bureau of Reclamation and the Corps of Engineers. Under the Flood Control Act of 1946, the Congress authorized these three agencies to join hands in developing the Missouri River program of protection against future floods, and expanded irrigation. But some of these tributaires to the Republican, for instance, involve a size of structure which may prove too small for the Bureau of Reclamation to undertake. For example, the Beaver Creek Reservoir, just across the line from us in Kansas, might be found of a size which the Bureau would feel should properly be delegated to the Department of Agriculture. The fertile valleys of that stream, which flow northward into Nebraska, through Beaver City and other points, and ultimately into the Republican River at Orleans, would lend themselves ideally to flood-retention dams, grassing of slopes, tree planting, and other devices which the Department of Agriculture is so well qualified to provide. Until such a program is undertaken, that rich farm area will continue to experience flood periods almost every year, with continued erosion and damage to farm lands and to urban property.

The projects involved on the Beaver and on the Sappa, and possibly even on the Prairie Dog, may prove of a size too small for the Bureau of Reclamation, and we do know definitely that, as of today, they are far too large to be handled under the county agricultural conservation payment program. We feel that your committee might consider authorizing an inbetween type of activity which could utilize the technicians now on the payroll of the Soil Conservation Service, permitting them to cross county lines and even State lines in their watershed

development. And there is much that could be said in the way of permitting the agricultural conservation payment funds to be made available for upstream projects of this character. Even if the Bureau should find itself able, a year or two hence, to undertake the dams and reservoirs on the Beaver and Sappa and Prairie Dog Creeks, as well as other tributaries in our overall Republican Basin, there will still remain a fertile field for the Department of Agriculture, above these reservoirs, to check the annual runoff, to hold back the silt, and to bring to the harassed agriculture of that area the type of know-how which we have learned the hard way during the past two decades in the Great Plains.

Thank you for this opportunity to add a brief statement for your committee's consideration. We hope earnestly that you may find it possible, this very year, to authorize a program of action.

The CHAIRMAN. The committee will adjourn until 10 o'clock tomorrow morning.

(Thereupon, at 11:10 a. m., the committee adjourned until Wednesday morning, 10 a. m., May 6, 1953.)

SOIL CONSERVATION AND WATERSHED PROGRAMS

WEDNESDAY, MAY 6, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10:00 a. m., in room 1310, House Office Building, Representative Clifford Hope (chairman) presiding.

Present: Representatives Hope (chairman), Andresen, Hill, Hoeven, Simpson, Belcher, McIntire, Golden, Williams, King, Grant, Gathings, McMillan, Polk, Wheeler, and Jones.

The CHAIRMAN. The committee will come to order. The first witness this morning is Mr. Richard Longmeyer, representing the Washita Valley Association.

(No response.)

The CHAIRMAN. Mr. Longmeyer has been detained, so at this time we will have Dr. Salter come forward, if he will.

STATEMENT OF ROBERT M. SALTER, CHIEF, SOIL CONSERVATION SERVICE

The CHAIRMAN. The other day several of the members thought that it might be a good idea if we could have an explanation from you as to the differences between a soil-conservation district which is carrying on the ordinary normal program of soil conservation and a district which is engaged in carrying on a watershed program. If you are prepared to answer that question now, we will be very glad to hear from you on that point.

Mr. SALTER. Thank you, Mr. Chairman. There are several differences between the way the activity is carried on in a district in which there is a flood prevention program and one in which there is not.

First of all there is a difference in the use of the land in districts with and without flood-prevention programs. In both programs the district program calls for the use of the land in accordance with its capabilities. But in a district without a flood-prevention program, this usually means that the bottom land, because of recurrent flooding will usually produce only relatively low value crops—hay and pasture primarily—and these, because of flooding and waterlogging and the puddling that comes from tramping of animals are usually relatively low in yield and quality.

In order to produce the necessary grain and other feed crops required for winter feed or cash crops in a district without a flood-prevention program, farmers are frequently forced to culminate the more sloping

and usually less-productive land—the kind that the Service calls class 3 and even class 4 land.

Here, because of the erosion hazard on these sloping lands, it is necessary to introduce such erosion-prevention measures as strip-cropping, terraces, sod waterways, diversion channels, and other such practices which cost money and add to the farmer's cost of production. Of course in a district where a watershed flood prevention program is in effect, the productive bottom land will be protected from flooding, at least from flooding more frequently than once in 10 to 25 years.

That makes it possible to use this potentially productive land for the more intensive crops such as the grain crops, alfalfa, cotton or others. That takes the pressure off of the more erosive hill lands and permits them to be put into pasture and meadow without the expense of special erosion-prevention measures.

Now, I might speak about the practices that are applied in the two kinds of districts. In both districts with and without flood-prevention programs, farmers cooperating with the district are given technical assistance by the Soil Conservation Service in developing and applying sound conservation plans embodying all of the practices needed for soil protection and improvement.

In a district without a watershed program the level of technical assistance provided will be approximately that of our national going program, which I think I pointed out to you the other day is currently estimated to get the once-over job done in about 30 to 35 years.

In a district which has a watershed program, additional technical assistance is provided within the watershed boundaries, aimed at getting this land-treatment job done on the farms at an accelerated rate. Our experience indicates that it is possible to get the land-treatment program substantially completed in a small watershed and get the land "tied down" in from 2 to 5 years.

The incentive of the anticipated flood-prevention benefits to the bottom lands, or the opportunity for the possible use of some of the small sediment pools behind floodwater-retarding structures for stock water and irrigation or other purposes, and the stimulus that comes from community interest in flood preventing, makes it possible to move ahead with a land-treatment program a lot faster in a district which has a watershed program.

Of course the land-treatment measures applied by the farmer on his own land at his own expense are a necessary part of the flood-prevention program in a watershed. But to get the full measure of flood protection needed, land-treatment measures have to be supplemented by certain special measures pointed at flood prevention—special waterflow-retardation measures, sediment-control measures, sometimes channel improvement, gully plugging, and so on.

Generally it is required that more than three-fourths of all the land in a subwatershed be under agreement with the soil-conservation district and that a substantial part of all the needed practices be installed, particularly in the areas above the location of structures, before beginning installation of special measures.

I am not sure whether all of this committee has had an opportunity to see any of these watersheds, and know what we mean by special flood-prevention measures. I have a few pictures, Mr. Hope, which I thought might be worth showing to the committee.

This first picture [displaying]—I will pass them around in a moment—is a small floodwater-retarding dam down in the Sandstone Creek subwatershed in the larger Washita watershed in Oklahoma. This little dam has a floodwater-retarding capacity of 253 acre-feet. Its water storage is equal to about 4 inches of runoff from the 790-acre watershed.

A drop inlet tube of about 12 inches in diameter is installed in this little dam, which lets the accumulated floodwater flow out gradually into the channel. The size of the drop inlet is so determined that at no time will the capacity of the channel be exceeded. It also has an 80-foot vegetated spillway at one end which will take care of those 100-year storms, where the floodwater will exceed the capacity of the pool.

This is just one of a number of little dams in the Sandstone Creek subwatershed in the Washita Valley, which includes 65,000 acres as shown on this map. The area colored in yellow is the valuable alluvial bottom land in that watershed. There is a total of about 4,700 acres of that bottom land, and the rest of it is largely upland, which is best suited to range purposes.

In this program we aim to put these floodwater-retarding structures, such as the one in the first picture, near the head of these little valleys so that the water can be impounded temporarily on the less valuable land. If you will look at the picture you will see that the land above the dam is pretty rough range type country. Below the dam you will notice the good alluvial land that is being protected.

In this little watershed there are 24 small floodwater-retarding structures, and this shows their location in relation to this valuable bottom land. Actually, it is estimated that these floodwater-retarding structures will protect all but 110 of the 4,700 acres of bottom land in this small watershed against a flood of 25-year frequency.

The bottom land in this watershed overflows on an average of about nine times a year—or did before this flood-prevention work was done. So far there has been no overflow since the program was completed.

Here is a picture of another type of structure used, a concrete chute which is used to get water from one level down to another without erosion. This was built in cooperation with the county highway department in the Nepper watershed of the Little Sioux in Iowa. We make frequent use of that sort of device to step the water down so as to prevent erosion.

Here is a series of four pictures, from the Little Tallahatchie watershed in Mississippi. This stream is above the Sardis Dam, indicated in this picture here [indicating] as the way it looked at the beginning. See that row of trees across the picture? The trees were interfering with the flow of water in the channel. Consequently, the water was dumped out on the farmland every time there was a big rain.

Here is a closeup of the same stream showing how the trees were growing into the channel. This picture represents the type of work done on that stream [indicating]. It involves such things as snagging, straightening, and sometimes enlarging the channel.

This shows pictures of the same stream after a heavy rain. The water was retained in the channel and didn't flow out over the agricultural land.

This next picture is from the Walling subwatershed of the Little Sioux in Iowa and illustrates a particular problem that we have to deal with—that of big gullies encroaching on agricultural land.

Mr. HOEVEN. I will say that the Little Sioux project is entirely within my congressional district.

Mr. SALTER. Yes, sir, it is within your congressional district. If you will take a close look at this picture, you will see a large gully which is eating back and has almost undermined this barn. You will note there is another gully on this side of the picture.

The next picture which I will pass around shows some of these measures that have been applied. A retarding structure has been built across that big gully. In this gully back of the barn we have a series of these concrete chutes that let the water down by degrees and have stopped it from encroaching further on the barn.

Here is another picture [indicating] which is also in the Tallahatchie River watershed in Mississippi above the Sardis Dam. It shows a structure used below a severely eroded area which has been contributing a large amount of sediment.

This is a sediment trap. This badly eroded land has been planted to kudzu and trees but there will be a time before that takes over adequately in preventing the further dumping of sediment into the stream.

Therefore, we put this little structure here to prevent the sediment from going into the reservoir below.

One final picture. This is from the Mortensen watershed in the Little Sioux and shows what we call a diversion dike. That is a dike which accumulates the water from this long hillside here.

It accumulates the water that comes down that hill and carries it down here to a cement chute which lets it down without erosion into the pool. I thought you might be interested in some of the pictures to see what we mean by these special flood structures in this program.

Now, Mr. Chairman, it might be appropriate for me to say just a word about how we plan these watershed programs in a district that has such a program. Planning a flood-prevention watershed program is basically a local responsibility.

To be sure, the local people must have the help of qualified technical experts just as the individual farmer needs the help of experienced conservation farm planners to develop a soil and water conservation plan for his individual farm.

Our experience shows that we cannot satisfactorily develop a plan for a much larger area than one in which we can obtain a community of interest among the people living in the area.

Some of our people say, "Unless you can get all the folks living in the watershed into a schoolhouse, the watershed is too big."

Generally the soil conservation district or districts take the lead in setting up the local organization which they may call a watershed association in a particular subwatershed or planning unit.

This group works with us in developing a plan that meets their needs and is technically sound and one that promises substantial excess of benefits over costs.

We ask this local group, as a minimum requirement, to make arrangements for furnishing, free of all Federal costs, the easements and rights-of-way needed for structures, and for assuming all operation and maintenance responsibilities for improvements after they are made.

Then we ask them to get busy on accomplishing the part of the job that they can do on their own lands. We give them the farm-

planning help needed to lay out their conservation practices, their terraces, strip crops, grassed waterways, pasture improvement, and woodland management. When they have accomplished enough of this job to have the watershed substantially "tied down" we are then ready to come in and give them assistance in building the structures and making the channel improvements and other flood-prevention work.

I am not sure that I have answered your question, Mr. Hope, but I am glad to submit to more questions.

The CHAIRMAN. That certainly does answer it in a general way. Perhaps the members would like to make some inquiries. Are there any questions?

Mr. MCINTIRE. Dr. Salter, it is my understanding that a soil conservation district is what you might call a legal entity. It is set up by State law and is, in the eyes of the law, a legal entity.

Now in the case of your watershed districts, is that also a legal entity organized under the same district authorization laws at the State level?

Mr. SALTER. Conditions vary in different States. In practically all States the soil conservation districts do not have the power of eminent domain or taxation, but in these watersheds there frequently may be some other kind of legal entity—such as a drainage district or irrigation district or some other agency that they can work in with.

Both in Kansas and Nebraska, during the past year, the legislatures have passed legislation providing for the establishment of local watershed districts which will have the power of eminent domain and taxation. They can assess benefits and apportion the local costs to the various interests in the watershed.

Mr. BELCHER. This Washita Valley project, that is not set up as a legal entity, is it?

Mr. SALTER. It is not a legal entity. There is an association in that valley which is made up of soil conservation district governing bodies, certain of the urban interests, people concerned with public roads, highways, and that sort of thing—a rather broadly representative association—but it is a legal entity, sir.

Mr. BELCHER. You have found that project to be very successful, have you not?

Mr. SALTER. It is moving along very nicely. The work is not going as fast as they would like to see it go but it is moving along and the relationships between the local people and the Government have been fine.

The CHAIRMAN. How long will it take at the rate you are going now, to complete that project?

Mr. SALTER. I am going to have to ask you to let me call on Mr. Brown to answer that question.

Mr. BROWN. About 45 years.

The CHAIRMAN. How long has it been under way?

Mr. SALTER. About 6 years. I have a map here of the Washita project. It is divided up into 64 small subwatersheds for planning purposes. One of them is this Sandstone Creek watershed, which is practically completed. Mr. Brown, how far along are we on the others?

Mr. BROWN. These green dots represent the amount of work that has been done in the various subwatersheds. There is only a scattering of work in watersheds other than Sandstone Creek thus far. That is the first one of the larger completed jobs.

The CHAIRMAN. Where is Mill Creek? Mill Creek was visited by some members of the committee a couple of years ago. It was partially completed at that time. Has that since been completed?

Mr. BROWN. No, sir; that has not been completed yet.

Mr. GATHINGS. Would you state for the record the number of acres involved in the Washita watershed?

Mr. SALTER. 5,095,040 acres.

Mr. GATHINGS. What is the mileage across from east to west?

Mr. SALTER. Six hundred and fifty river miles.

Mr. GOLDEN. I would like to ask you a few questions, if you please, Dr. Salter.

This watershed program—do you have it intiated or started in a great many or just a few sections of the United States?

Mr. SALTER. At the present time it is under way only in 11 authorized watersheds.

Mr. GOLDEN. Are you familiar with a watershed program over in the State of Ohio? I do not know the name of it but I have been talking to my colleague, Mr. McGregor, who seems to be quite familiar with it and it has been an outstanding success.

Mr. SALTER. I assume you are talking about the Muskingum watershed program which was started quite a few years ago in the Muskingum River Valley.

Mr. GOLDEN. Has that not solved their great flood problems and also conserved their soil and caused them to be able to produce much more agricultural products in the area and has it not protected the towns and also has it not been a great factor in building up the wildlife?

Mr. SALTER. Yes. That project has proven to be very successful. It has been accompanied, however, by a very fine program of soil and water conservation on the land and the planting of a great many trees. That project was primarily a project of reservoirs and dams, but following its installation, a special effort was made by the people in that area, with the assistance of the land-grant college and the Soil Conservation Service to put on an effective land-treatment program which has contributed greatly to the success of the whole project.

Mr. GOLDEN. How is the cost of these watershed programs distributed? Who has to pay for them?

Mr. SALTER. Well, there has been a considerable variation among the different watersheds in the distribution of costs. The costs are shared by the local people and the Federal Government. The minimum requirement of the local people has been that they stand the cost of the land-treatment program, plus supplying the easements for the structures, and they also agree to take care of the maintenance on the structures.

Roughly speaking, the minimum local contribution for the structural part of it may be as low as 10 percent of the total cost of the structure program.

In addition to that, they have to pay the cost of all of the land-treatment program. However, in several of the watersheds there are urban or industrial interests also involved, and through negotiation they have undertaken a part of the costs of the project.

I believe that for all of the 11 authorized watersheds it is estimated that the division of costs between the local people and the Federal Government has been about 40 percent for the local interests, 60 per-

Floodwater-retarding structure No. 15 in Sandstone Creek subwatershed, Washita River watershed, Oklahoma. Note impoundment area is in low-value rangeland. Structure will temporarily detain 253 acre-feet or nearly 4 inches of flood runoff from the 700-acre drainage area. Twelve-inch reinforced concrete pipe slowly releases stored floodwaters. Eighty-foot-wide vegetated spillway provides for emergency discharge of flood flows in excess of 25-year frequency.

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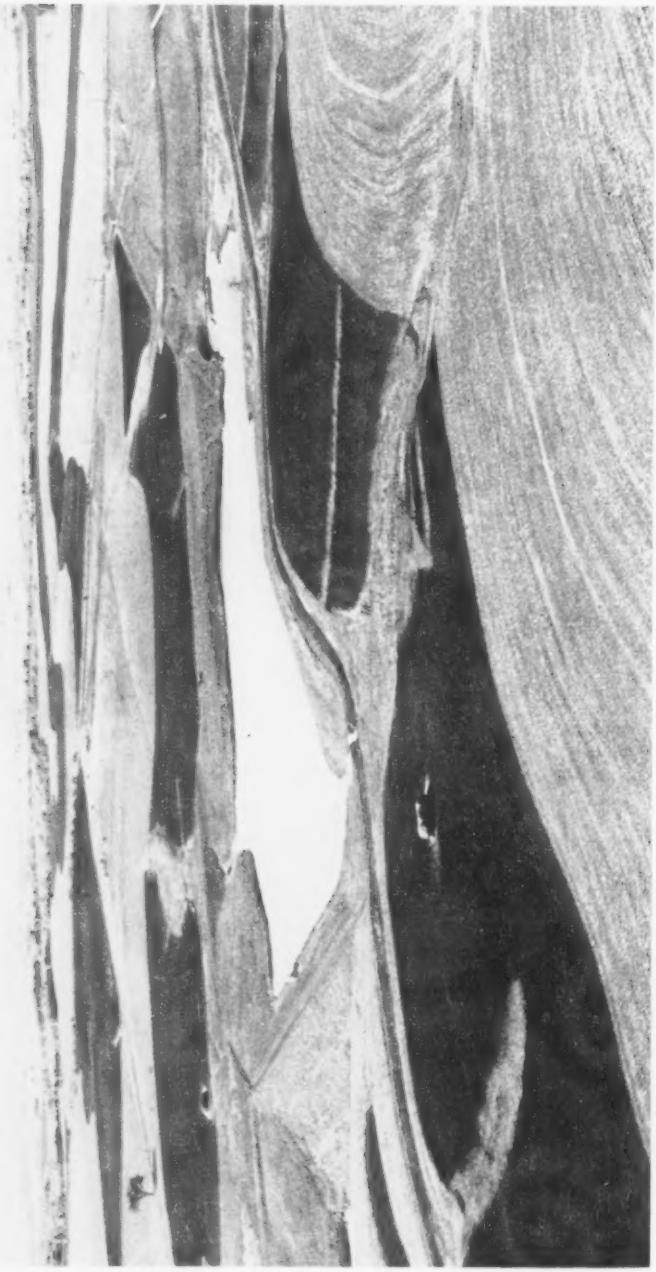
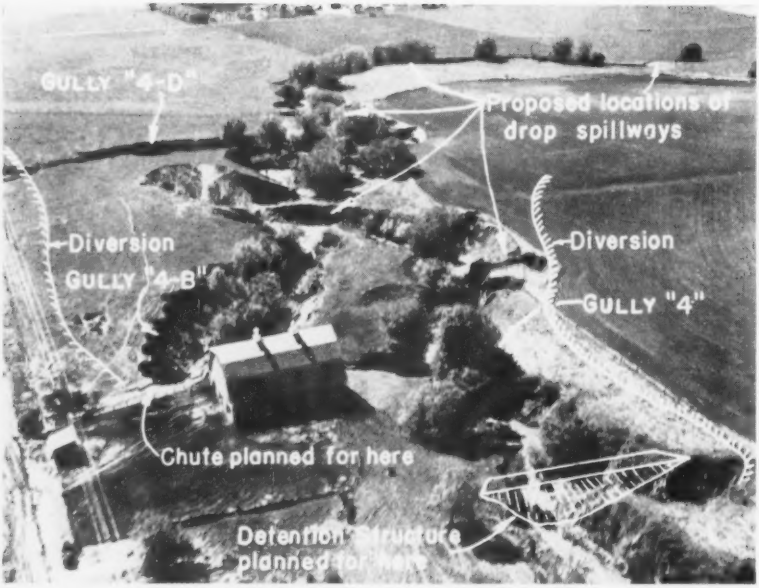


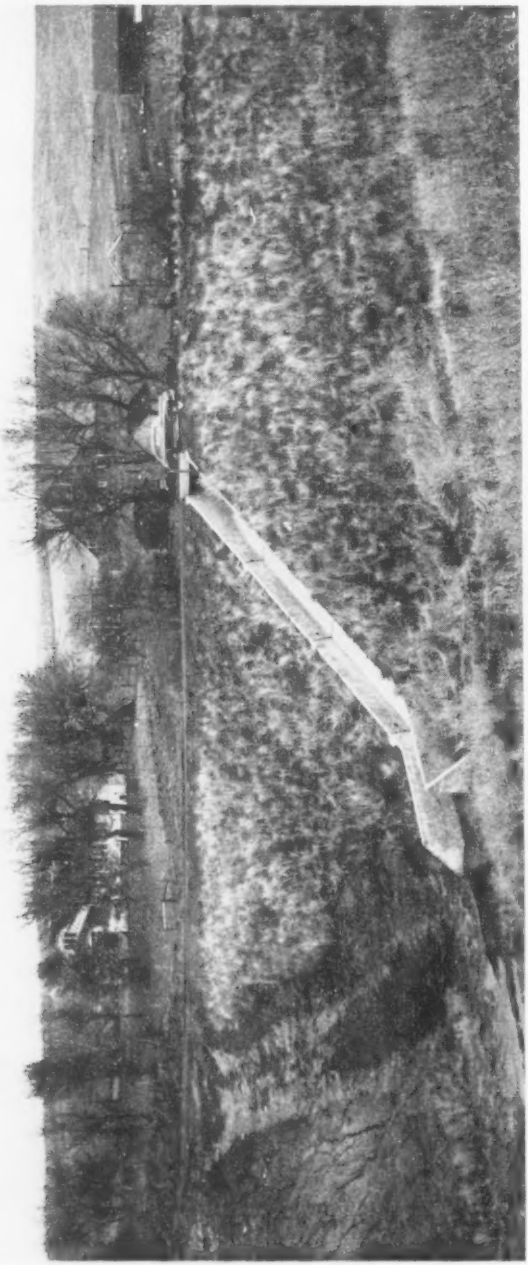
Floodwater-retarding structure in Mortenson subwatershed of Little Sioux watershed, northwest Iowa. Strip cropping, field-grassed waterways, small drop structures to drop runoff to pond in back of dam. Coordinated land treatment and water-disposal system. Diversion in foreground collects runoff from contoured strip-cropped field in foreground, to chute structure, to pond.

Sediment trap, Little Tallahatchie River watershed, Mississippi Note the badly eroded abandoned cropland in the background. This area has been planted to trees and kudzu.



Badly gullied area, Walling subwatershed, Little Sioux watershed, Iowa. Note barn about to be undermined. The location of the control measures is indicated.

Walling subwatershed, Little Sioux watershed, Iowa, after treatment. Same location as previous picture immediately after construction of the control measures. Note detention structure, the diversion to intercept and to lead the runoff through drop spillway into the new stabilized waterway. The gullies are controlled.



Grade-stabilizing structure, Nepper subwatershed, Little Sioux River watershed, Iowa. Reinforced concrete chute to stabilize grade of waterway, built at road crossing with cooperation of county highway department.

Little Tallahatchie River above Sardis Dam, Mississippi, before treatment. Note how badly the channel is obstructed with heavy growth of trees and brush.

Little Tallahatchie River above Sardis Dam, Mississippi, after channel improvement. Same channel as shown in previous picture after clearing and cleanout of channel. This job was a cooperative undertaking between the Soil Conservation Service, Corps of Engineers, and the Tallahatchie River Drainage District, the latter floating a bond issue of $230,000 to take care of its share of the costs of the channel improvement work. The division of costs is 60 percent Federal, 40 percent local. In addition the district furnished all easements and will maintain the completed work.

cent for the Federal Government. I don't think that represents the maximum, however, of local participation that can be expected. I think as people understand more about this watershed program—not only farmers but the urban people—that the share of the total cost that can and will be borne by the local people probably can be considerably higher.

Mr. HOEVEN. Do you have a map of the Little Sioux project here?

Mr. SALTER. I am sorry I do not have it here.

Mr. HOEVEN. Can you tell me how long it will take to complete the project?

Mr. SALTER. I am going to have to turn to Mr. Brown again, if it is all right.

Mr. BROWN. At the present rate it is going to take about 75 years.

Mr. HOEVEN. How many acres are involved?

Mr. BROWN. It is around about 2 million acres, I would say, roughly.

Mr. HOEVEN. Of course our people are very much interested in the Little Sioux project. No doubt you share my concern about the long time it is taking to complete the project. Fifty years is a long way off. I do want to say that there is the highest cooperation in this soil conservation district between the Department of Agriculture and the farmers themselves. They are vitally interested and the only regrettable part about the whole thing is the long time it is taking to complete it.

Mr. GATHINGS. Dr. Salter, has your department looked into the question of the benefits that would be derived out of the completion, over the long number of years, of the Little Sioux and the Washita watershed project.

Mr. SALTER. Yes. These projects are all based on surveys in which the anticipated benefits are estimated.

Mr. GATHINGS. What is the percentage of benefits copmared to cost?

Mr. SALTER. It ranges from about 1½ to 1 to 3½ to 1 on the going projects. That is, the ratio of benefits to cost. I think the Washita program is a little less than 3 to 1, overall.

Mr. GATHINGS. You have looked into the question of the need in America for expanded production?

Mr. SALTER. That is correct.

Mr. GATHINGS. To care for an expected 175 million people in 15 to 20 years?

Mr. SALTER. Well, we hope that this program will move ahead fast enough to make a contribution to the food and fiber supply of this Nation within the next 20 to 25 years.

Mr. MCINTIRE. Dr. Salter, the only question I had was in your reply to Mr. Golden's question relative to cost. If I remember correctly, you mentioned that the landowner stands the cost of improvement practices on his own farm. Would that be less his agricultural conservation program payments?

Mr. SALTER. I should have brought that out. Many of these practices are the permanent type practices which have been and will probably continue to be eligible for agricultural conservation program payments. To the extent that he can share in the agricultural conservation program of the county, he gets payments for that work.

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Mr. McINTIRE. And the contribution of the Government is increased by that amount?

Mr. SALTER. Yes, sir.

Mr. POLK. I believe you mentioned that there are 11 authorized projects in the United States. I wonder if you can give us a list of those 11 projects.

Mr. SALTER. I am sure Mr. Brown can give them to you.

Mr. POLK. I am naturally interested in the projects in Ohio. I am wondering if there are any authorized projects in Ohio.

Mr. SALTER. There are none in Ohio, sir.

Mr. BROWN. The 11 projects are as follows: The Buffalo Creek project in New York State, the upper Potomac River area, in Virginia, West Virginia, Maryland, and Pennsylvania. The Coosa watershed in Georgia, the Yazoo and Tallahatchie projects in Mississippi, the Little Sioux project in Iowa, the Washita watershed in Oklahoma and Texas, the Trinity River in Texas, the Middle Colorado watershed in Texas, and the Los Angeles and the Santa Inez watersheds in California.

Those 11 were all authorized in the flood control act of 1944.

Mr. POLK. I am sorry I was not in Congress in 1944. I am wondering what we should do in Ohio to get some projects started. We need flood control and we need soil conservation.

Mr. BROWN. We have a survey report on the Scioto watershed in Ohio which was submitted at the last session of the Congress and is now pending before the Public Works Committees.

Mr. POLK. The Scioto River traverses four counties of the district that I have the honor to represent.

Mr. BROWN. There is a survey report on that which was printed as a House document last session.

Mr. GATHINGS. Mr. Chairman, I wonder if it would be possible to place in the record some of these better photographs and also the very fine picture of the Washita watershed. Could it be reproduced?

The CHAIRMAN. The Chair does not know what the possibilities are. Has any member of the staff had any occasion to look into that?

(Off the record discussion.)

The CHAIRMAN. Mr. Heimberger says that it is possible to reproduce pictures as part of the record of hearing, and that can be done without express permission if it is below a certain cost. If it is above that, we will have to get permission.

Mr. GATHINGS. Mr. Chairman, I trust that something could be done in order to complete this record, for the inclusion of some of these pictures.

The CHAIRMAN. Is there any objection to that being done?

(No response.)

The CHAIRMAN. If not, the Chair will go ahead and select some of the more appropriate pictures characteristic of the work that is being done and have them inserted in the record. Are there any further questions?

(No response.)

The CHAIRMAN. We thank you, Dr. Salter, for appearing before the committee.

(Illustrations referred to above appears on pp.165–172.)

The CHAIRMAN. Mr. Longmeyer has not yet appeared apparently.

At this time we will hear from Mr. D. A. Williams, the Administrator of the Agricultural Conservation Program.

STATEMENT OF D. A. WILLIAMS, CHIEF, AGRICULTURAL CONSERVATION PROGRAM

Mr. WILLIAMS. Mr. Chairman, I have some copies here of my general statement. I also have with me this morning Mr. Ritchie, Deputy Chief, and Mr. Hunt, who is Chief of our Division of Program Analysis.

The CHAIRMAN. Would you like to have them sit near you there where they might be available?

Mr. WILLIAMS. Yes.

The CHAIRMAN. All right. You may proceed.

Mr. WILLIAMS. Mr. Chairman, and gentlemen, I appreciate this opportunity of presenting information concerning the past, current, and proposed agricultural conservation programs.

We desire to cooperate fully with this committee in making the agricultural conservation program a more effective tool in conserving our soil and water resources.

The agricultural conservation program is only one segment of the conservation facility: There are many segments of our total national effort for achieving conservation.

Research to determine our conservation problems and the means by which they may be economically solved is essential; achieving farmer understanding through education to recognize these problems and their solutions is fundamental; technical assistance in inventorying, planning, and applying the most practical, economical and efficient solutions to these problems, especially where the solution is of a complexity beyond the ability of the farmer to meet, is also a prime requisite.

Financial assistance, or cost sharing, seems also to be an important part of the whole.

Standing alone, cost sharing is not enough but without some degree of it the facilities of research, education, and technical assistance may not be fully effective when farmers are unwilling or unable, as rapidly as is in the public interest, to completely meet the cost of conservation work with their own resources.

Credit, perhaps in a form better adjusted to the particular needs of conservation work, may be an increasingly needed effective means to solution of our conservation problems.

It is only when these segments of the whole are properly correlated with each other that the most effective results can be achieved by farmers and by State and Federal Governments.

We are making every effort to insure that the financial assistance under the agricultural conservation program plays its proper and fitting role as one segment of the total public endeavor.

Since the agricultural conservation program is an important phase of the Nation's effort to conserve and build our agricultural resources, I would like to review with you its history.

First, the agricultural conservation program prior to 1944: In its beginning in 1936, the agricultural conservation program was a dual-purpose program designed to conserve agricultural land and water resources and to increase the purchasing power of the farm economy.

In those early years the major portion of the program funds was used for payments to farmers for adjustment of their production of crops such as cotton, wheat, and corn.

Funds used for conservation payments increased each year as more farmers became aware of their conservation problems and resolved to meet them.

The agricultural conservation program from 1944 to 1953: Beginning with the 1944 calendar year program, the Congress limited the appropriation for the agricultural conservation program each year to assistance to farmers in carrying out programs for soil-building and soil- and water-conserving practices.

Continuing efforts have been made to direct the program more effectively toward the meeting of the total conservation job.

This has been implemented through an increasing understanding by farmers and nonfarmers of soil and water conservation problems, changes in technology of farming operations, and by a substantially increased knowledge acquired through research as to how our soil and water conservation problems may best be solved.

There has been a continuing effort through the years to improve both the quality of the program practices and the effectiveness of program administration in the interest not only of farmers but of all the people of the Nation.

To insure quality practices, technical services are required. The Congress has provided for this by authorizing the transfer of up to 5 percent of the program fund in each county to the Soil Conservation Service to cover the cost of technical services needed for the agricultural conservation program. This provision is being utilized more and more.

It now appears that at least 2,200 counties will enter into agreements to use funds in this manner for 1953.

This transfer arrangement has accomplished, with a high degree of success, at least two objectives: (1) The development of closer working relations of conservation agencies at the county level, and (2) the formulation and carrying out of a more technically adequate agricultural conservation program.

A great deal of training and supervisory work has been necessary on the part of both the Soil Conservation Service and the agricultural conservation program to attain these objectives.

The very substantial progress in closer working relations of county and State committees, soil conservation districts, Soil Conservation Service technicians, Forest Service representatives, extension workers, and others by joint consideration of programs, workloads, and schedules are now well accepted and will be, we believe, maintained in a truly cooperative spirit.

More and more the Congress, the public generally, the departments and agencies of State and Federal Government and farmers themselves have questioned the eventual role of the agricultural conservation program in meeting our conservation problems.

The Congress especially has urged officials responsible for administration of the program on a national basis to direct the program to the most needed and more lasting or permanent-type conservation practices and then only where the work will not be done without program assistance.

The program for 1953: The two major objectives of the 1953 agricultural conservation program are: (1) The achievement of a greater total quantity of conservation on more of our farms and ranches, and (2) the utilization of available program assistance on

what the farmer believes to be the most urgently needed conservation work that he is in position to undertake on his farm and for which he needs program assistance during 1953.

These objectives have been established to conform with the indicated desires of the Congress and to be consistent with the advance authorization provided in the Appropriation Act for the fiscal year 1953.

Early reports show that 25 percent more farms than in 1952 have indicated a desire to praticipate in the program in 1953; and that 10 percent more of the program funds are being directed to the more permanent-type conservation work.

This is an indication of substantial progress toward the objectives which the Congress has established.

Looking forward to 1954: In planning ahead for direct financial aid to farmers for conservation work in 1954, several things have influenced the judgment in selecting what we believe to be the wisest course that may be undertaken at this time.

We cannot, I believe, assume that the administration of this financial aid program has been perfected. The program should be studied and re-examined continuously from the standpoint of the type of assistance being offered, and whether the farmer can and should be expected to carry out some of the practices previously included with his own resources.

We have subjected the program to a critical examination and have proposed substantial changes for 1954.

First, it is being recommended that the authorization for the 1954 program be granted by the Congress with the understanding that program assistance be confined to the more lasting or permanent-type conservation practices.

Such practices usually produce the more enduring public as well as private benefits. The following principles have been suggested as a guide in the determination of the type of practices eligible for financial assistance:

(1) Enduring (permanent type) mechanical and vegetative practices whose benefits will continue through a period of several years when they are (*a*) properly applied where needed to attain the conservation objective, and (*b*) adequately maintained.

(2) Practices needed for conservation purposes but which would not likely be initiated in an area by farmers without financial assistance.

(3) Practices which although essential to the public welfare will not return sufficient short-term economic benefits to the farmer to provide the necessary encouragement to him to install them.

There is a reasonable association between the more lasting conservation practices and those for which farmers generally need assistance most.

The more permanent-type practices often require rather heavy outlays to establish and the benefits from them are realized over many years rather than in a short time.

The more often repeated practices by their very nature are likely to be ones which pay off through increased production within a fairly short time. It is not enough, however, to speak of a program as being properly directed if it is restricted to the enduring or permanent-type practices.

We recognize a further obligation. Although a practice may be relatively permanent, we should not use program assistance on it over and beyond the amount essential to the adequate performance of the practice on the individual farm.

We believe that this concept is right for the interest of the general public and that it is right for the farmer.

The agricultural conservation program permits farmers in any locality having a common conservation problem affecting more than one farm to make what is known as a pooling agreement under which they combine the agricultural conservation program assistance otherwise available for their individual farm practices into a joint fund together with their own resources to meet a common problem.

For 1954 we propose to more strongly emphasize this facility and to encourage, more than ever before, farmers to utilize the program funds available to them for the work on these joint projects.

This, we believe, will help to achieve the solution of small watershed and other community conservation problems.

A proposal has been made to the Congress which would permit the Secretary to announce a 1954 program without the commitment of increases in small-sized payments that would otherwise be required by the provisions of section 8 (e) of the Soil Conservation and Domestic Allotment Act.

It is our belief that the original intent of the Congress, as borne out by legislative history, was that these payment increases only be used as income supplements for small farmers.

The provision actually applies to all small payments earned without regard to whether earned on a small or large farm. At this time approximately 90 percent of all payments earned by farmers under the program are less than $200, and therefore are required by law to be increased.

That these payment increases are not restricted to small producers, as undoubtedly was contemplated by section 8 (e) of the act, is evident.

The projected 1954 program does not constitute a reversal of the congressional policies heretofore in effect, but rather the Department's position in this matter is taken with the view to more firmly and assuredly achieve the objectives heretofore set forth by the Congress.

We believe that the indicated adjustments in the program and its administration will further the objectives of a sound, efficient financial assistance program for soil and water conservation.

The CHAIRMAN. Thank you very much, Mr. Williams, for your statement. I would like to ask you how many farms were in the agricultural conservation program in 1952?

Mr. WILLIAMS. I believe I have that information. In 1952 the number of farms participating according to our best records, the final figures for 1952 are not tabulated yet, was 2 357,000.

The CHAIRMAN. Do you have any figures for 1953 at this time?

Mr. WILLIAMS. We have a projected figure which is entirely an estimate, that there will be approximately 3 million on the basis of the indicated sign-up which was carried out last fall.

The CHAIRMAN. Is that increase due to the campaign which was carried on to get more farmers to sign up or were there other reasons?

Mr. WILLIAMS. I believe there were several reasons, one of which was a growing understanding of the importance of soil conservation; another was the type of sign-up procedure that was used last fall in

which the community committeemen, the farmer committeemen in the community, were asked to contact each of the farmers in their communities and explain the program to them and obtain from them their indicated desires with respect to the type of assistance that they desired for the 1953 program. I believe there were a number of factors entering into that total which on a national basis appears at this time to be about a 25-percent increase in numbers over 1952.

The CHAIRMAN. That means that the payments per individual and the payments per practice that were carried out would be less than the previous year, is that right?

Mr. WILLIAMS. That is right. It will be substantially less. Actually we do not know what the final figures will be on it but it is obvious that if there are as many as 600,000 to 700,000 more farms participating in the program, with about the same amount of money or a little less available for the 1953 program, that there will be less funds per farm available.

I would like to say in that regard, however, Mr. Chairman, that 1953 was the first year of the program in which county committees approved the assistance to farms on a practice approval basis rather than on a farm allowance basis. That procedure was set up last year in connection with the issuance of the 1953 Agricultural Conservation Bulletin and the applications for assistance made by farmers for the various practices that they felt they needed assistance on were reviewed by the county committees, and with the funds that were available the committees approved the practices with what was known as a minimum provision, a minimum guaranteed amount. This was the amount that appeared would be available for that practice. In spreading the money available to a larger number of practices as well as a larger number of farms there is actually a substantial reduction apparent in the amount of funds available under the program authorized last year for this year.

The CHAIRMAN. I have had a complaint, the substance of which was that there were so many more applications than had been anticipated—so many more than there had been in previous years—that it was being realized by farmers and by the committees also, that the payments could not be on the same level as in previous years. Consequently, it was necessary to tell farmers that it could not be made known at the time they signed up what the payments would be for certain practices, that that would have to be determined after taking into account the increased participation.

The fear that was expressed was that that very fact might discourage participation on the part of farmers who had indicated an intention to do so. I wonder if you have had that complaint and if you have any comment you want to make on it. Do you think it is a situation that should cause some concern?

Mr. WILLIAMS. Mr. Chairman, I believe that that situation does exist in some areas. It is one of a number of problems that we have in this 1953 program which came about perhaps for a number of reasons. I think perhaps a lack of full understanding on the part of farmers and even on the part of county committees that this year for the first time they were making practice approvals rather than a farm allowance, was quite an item in itself to become understood.

During the sign-up period, the farm-to-farm contact last fall, many farmers indicated their desire to carry out a good many practices.

The objective was that the farmers would indicate the most needed practice, and I am sure that in the substantial majority of cases that is actually what happened: that they did indicate the practice that was most needed for their farm and that they would be in a position to go ahead with, but a number of factors I believe have entered into some degree of discouragement, one of them being the smaller amount of money being available this year.

Now it so happens that with the procedure used in some cases it actually has been an injury to the permanent type practice work, because where assistance was requested for a number of practices, one or two of which might have been permanent-type practice work and some of recurring or repeat-type, the farmer perhaps has found since his sign-up that he was not able to proceed with the permanent-type practice work for one reason or another and desired to again proceed with the type of practice that he had been receiving assistance on in previous years.

We have had all sorts of situation—I do not think that the situations are exactly identical in any two States, or perhaps not any two counties, but certainly the problem you mentioned, Mr. Chairman, is a real one. There is no real effective means of meeting it this year in the 1953 program, because the procedure was established in June—it was announced in July rather, in 1952, when the national bulletin for the 1953 program was issued, including the sign-up procedure and provisions which placed limitations on substituting one practice for another and so forth. Most counties did find it necessary to use what we have termed the minimum and the maximum approval basis, in which they could only guarantee assistance to the farmer at a certain minimum level. Then if funds become available bacause of farmers not preceeding with the program during the year or otherwise, it would be possible to give them additional assistance for additional units of practices carried out, county committees indicated a maximum level of approval. So there were two levels of assistance: The minimum or the lower level being a guaranty by the county committee, the maximum level being the upper limit to which it would be possible to go, represented by the number of units of the practice multiplied by the credit rate.

For example, the acres of a practice or the feet of drains, or whatever it might be, multiplied by the permissible credit rate, would be the maximum possible assistance that the applicant could receive, but actually farmers have had to depend, in making their specific plans, on this minimum level rather than on a hope that there might be additional funds available.

The CHAIRMAN. There is a very great difference, is there not, between States, as to the type of practices carried out—what I have in mind is that in some States there is a much larger percentage of the money paid out for practices which are described as long-lasting and in other States the great percentage goes to the recurring practices, is that correct?

Mr. WILLIAMS. That is correct. There are a number of States that have made a substantial shift during the past 3 or 4 years into the so-called permanent type practices. I might mention just a few of those States. This is not a complete list and some of the States have not gone all the way into a permanent practice program. I will mention some of them across the country.

For example, the State of Texas has eliminated assistance for contour farming intertilled crops. They did that in 1948 after having given aid on over 2½ million acres in 1947 and over 59 million acres from 1938 to 1947, inclusive. It also eliminated assistance for contour stripcropping in 1948, and has greatly reduced assistance for contour farming close-sown crops and for stripcropping not on the contour.

Another example: Idaho out in the West eliminated assistance for protecting summer fallow in 1948 after having given assistance in 1947 for 486,000 acres and for over 4 million acres from 1936 to 1951, inclusive.

Incidentally, a survey that was made in Idaho indicates that even though no financial assistance was offered in 1948 and 1949 there was a greater acreage of summer-fallow protection without financial assistance those 2 years than there was in 1947 when assistance was provided for protecting summer fallow. I am sure that that is not a common situation and may not be pertinent to different types of practices.

Mr. JONES. Mr. Chairman, may I ask one thing right there?

The CHAIRMAN. Yes.

Mr. JONES. You mentioned the fact about those practices increasing after the payments had been stopped. How long do you think that the practice should be continued in a locality to sell a farmer and to get him to use practices without maintenance? Is there any yardstick for that?

Mr. WILLIAMS. If there is a formula on that I do not know what it is and I do not believe that the same formula would necessarily apply in different types of agricultural areas where you have different types of human interest as well as different types of agricultural problems.

Mr. JONES. Let me see if my thinking is straight on it. In other words, did we start this program to encourage this and then hope that we could drop it off after we had sold the farmer on making this investment?

Mr. WILLIAMS. That is my understanding of the original intent of the program, to help initiate conservation practices into an area so that farmers when they saw the advantage of them, would go ahead to the maximum of their ability, without further financial assistance.

Mr. JONES. In this Idaho thing you mentioned, are they restoring those payments this year?

Mr. WILLIAMS. Not for that practice.

Mr. JONES. It is over in that particular locality from now on?

Mr. WILLIAMS. So far as Federal financial assistance is concerned, I am sure that the local people feel that there is no further need for financial assistance on protecting summer fallow. Now what they are doing is using the financial assistance for other types of practices which have not reached that stage, and there has been a shift toward the more permanent-type practices. I would like to mention one other State.

Mr. JONES. I am sorry to interupt. I just wanted to get that in mind.

Mr. WILLIAMS. One other State which happens to be an eastern State: In 1953 South Carolina eliminated from its program the practices of establishing green manure or cover crops of winter legumes, annual ryegrass, summer annual legumes, and small grains, after having averaged 654,000 acres of assistance for those practices from 1936 through 1951.

Mr. CHAIRMAN, in answer to your question I think that these are merely some indications and not full proof in themselves that it would necessarily work that way in all States or in all practices, but there are indications that with the emphasis that the congressional committees have given to getting a more sound job done during these past few years that there have been shifts taking place and these shifts have been made by the people out there in the States themselves. For example, South Carolina, the State committee working with the other groups in the State, themselves decided on this sort of a shift. There are many other States which have gone almost all the way and I might mention Arizona and California which, for the past 2 or 3 years, have been almost exclusively on a so-called permanent-type practice approach. Kansas is another State which has gone very largely in that direction.

The CHAIRMAN. Up to this time, within the limits of the practices which were permitted, under the overall program, the initiative has been taken in the States themselves in shifting to a more permanent-type practice, is that correct?

Mr. WILLIAMS. Mr. Chairman, I think that the initiative has come from several different sources, one of which I have already mentioned: The intent of Congress to make this program as sound as possible. The efforts that have been made by the administration to work in that direction, the encouragement that has been given at the State level, the various groups working together there, to try to get a sounder basis, and then the feeling on the part of farmers themselves that financial assistance should go to those things which they really need some help on. I am sure there is a very substantial feeling on the part of many, many farmers—I do not know what the percentage is—that there is the direction that they would like to see it go.

The CHAIRMAN. Mr. McMillan?

Mr. McMillan. In our State during the past years there are a number of counties that have combined offices and abolished a number of county offices in order to give better official and technical assistance. Do you think that is a good idea?

Mr. WILLIAMS. I think that the consolidation of offices, particularly at the county level, has been very, very helpful in many situations. Of course in many counties they were already working so closely together that perhaps it did not mean quite as much as another place where there had been wide separation. I think it has helped a great deal in many counties.

Mr. POLK. Mr. Williams, I am very much interested in this Agricultural Conservation Program, representing as I do nine counties in southern Ohio, and recently I was back in the district and while at that time we did not know just what the program might be for 1954, I found that there was much concern on the part of our farmers in reference to our agricultural conservation program for the next year. Recently there came to my attention your Agricultural Conservation Program Memorandum No. 5, Development 1, and I have studied that very carefully to see how we can fit your recommendations into the program in southern Ohio.

As you know, during our previous agricultural conservation program, the farmers have had something to say about the type of practice that they use on their farms. They have more or less developed the program themselves through the PMA committees in each town-

ship, but here we have, as I read it, a very strict recommendation from the Department which puts a sort of straitjacket on the Agricultural Conservation Program.

During the recent campaign we heard a lot about farmers running their own programs, giving them more local control, but it seems to me, under this program, as you have outlined it in Agricultural Conservation Program Memorandum No. 5, that the Department, the Secretary of Agriculture, and his assistants are going to force the farmers to do things that they probably cannot do on their farms. I would like to ask a few questions along that line. Are you not precluding the farmers in Ohio and others, who have a similar type of agriculture, from carrying out 90 percent of the conservation practices which farmers have helped formulate in recent years?

Mr. WILLIAMS. Mr. Polk, I would like to comment at considerable length on your question. In the first place, if I may, with respect to the memorandum that you referred to, Mr. Polk, I want to assure the committee that there is no intent on my part or on the part of the Secretary to force any program down anyone's throat. This particular memorandum was sent out, dated April 10, 1953, and the transmittal reads as follows:

> Transmitted herewith is Agricultural Conservation Program Memorandum 6, Development 1, issued by the Chief, Agricultural Conservation Program, which asks for county and State recommendations for the 1954 National Agricultural Conservation Program Bulletin, and which sets forth a guide for tentative development of State and county programs for 1954.

In this particular memorandum we have done our best to couch it in the words that would encourage the maximum of suggestions and recommendations as to what the program ought to be, county by county and State by State. There was no intent to, in any way, stifle recommendations or suggestions coming from each and every county, from each and every State. We have assured all State PMA committees in a series of meetings just completed, that their recommendations, not only with respect to the type of program but with respect to the procedures, how it ought to be carried out, would be given full consideration, as it has been heretofore in previous years.

It is true that in the type of program proposed by the Secretary for next year, indicating a permanent type practice program as a proposal, that we thought it desirable to make some suggestions to stimulate thinking on the part of counties and States as to what they might feel would be the desirable program.

Mr. POLK. I would like to make a comment. Practically all of our eastern agricultural colleges recommend that the use of agricultural lime is one of the most important practices that we should follow on our farms, in order that we may get our soils in condition to grow clovers and alfalfas and build up the organic matter in our soil. In Ohio we could never get our farmers to use more than 400,000 tons prior to the ACP program.

Under the ACP program I believe Ohio farmers applied about 2 million tons—the greatest amount that was ever applied in Ohio—and the advisory committee of the agricultural colleges recommend about 395 million tons, I believe, over the United States and about 47 million tons annually.

My second question, following that out: Do you not think, Mr. Williams, that the type of program you propose will materially reduce

the use of agricultural limestone not only in Ohio but throughout the United States?

Mr. WILLIAMS. Mr. Polk, I believe that the type of program proposed—I do not know what the dollar level of that program may ultimately be, but based on the proposal of the Secretary of a 1954 program of $140 million, I believe that there will be a reduction in the use of lime financed in part with Federal funds. I would like to make it very clear, however, that the type of program that we have suggested for consideration and asked for comments on, does not eliminate lime or fertilizer from the program. Far from it. We recognize in the suggestion the necessity for the use of lime and fertilizer where they are needed, where the soil needs it, for the initial establishment of vegetation. We have not included in our suggestions here, again asking for comments from the States, we have not included that part of the lime use or that part of the fertilizer use, which is for maintenance of practices.

In other words, what we commonly call top dressing on established pastures or established hay land which is largely for increased production, has not been included in the suggested program. We do not know what the final dollar level of the program might be, and because we do not know what the final practices are going to be in the 1954 bulletin until we have the recommendations from the States, we do not know just exactly what the total effect on tonnage of lime in Ohio or any other State might be.

Mr. POLK. Mr. Williams, I would like to point out that the reasons for my asking the first question is the fact that a tabulation which I have made here of practices that were used in 1951 in Ohio indicate that at that time there were 184,755 farms that used some type of the former agricultural conservation program and as I have studied through the new recommendations, going back to what was done in Ohio in 1951, only 17,881 farms, as compared with 184,755 farms, would be able to use your new suggested type of practice.

In other words, about 90 percent of what the farmers in Ohio did in 1951 has been eliminated in this suggested program. I would like to ask 2 or 3 more questions, Mr. Chairman.

Mr. GATHINGS. It looks to me like you have asked a good question there. I would like to get the answer to that one.

Mr. POLK. Would you care to comment on that?

Mr. WILLIAMS. I do not have the detailed figures for Ohio on hand here so I will have to generalize to some extent, Mr. Polk, but I would like to point this out: that in the conservation needs estimates submitted by the State of Ohio as of January 1, 1950—in other words, the total conservation job ahead—they indicated some highly substantial figures with respect to types of practices that are the so-called permanent types of practices. For example, they had 17,000 acres of sod waterways. They had over a million acres of tree planting indicated as needed; over 1,500,000 acres needing terracing; over 3,500,000 acres needing contour strip cropping; and various other practices.

Drainage was a big item, and so on. The type of program proposed perhaps is not completely understood yet and I am sure there has been some lack of understanding and some fear about it that may not actually be present in the suggestion.

Mr. POLK. The difficulty in many parts of Ohio, particularly the central part of the State, is that the establishing of sod waterways or tree planting, those projects that are good and are permanent, they are all right but they just do not fit our type of agriculture. In the level agricultural area of the central part of the State it is impossible for the farmers to work out a conservation program using the memorandum 5 recommendations that you have submitted. That is the reason for me interrogating you on this particular program.

Mr. WILLIAMS. If I might make just one more comment, with respect to the types of vegetative practices that are included in this suggested type of program. One practice would provide for the conversion of land that should not be in cultivation, whether that is from the standpoint of erosion or areas that cannot be economically drained, because of alkalinity or whatever the situation might be, that it should go out of cultivation and go into permanent-type cover, which might be grass or trees.

Another suggestion which I am sure will be included and is needed to a great extent, which is a new practice that has not been in the program heretofore, at least not in recent years, is a suggestion that we have a practice for the establishment of long-term rotations on cropland. That is not on land that needs retirement but on land that is suitable for cultivation but needs organic matter; it needs a systematic crop rotation for getting grass and legumes into the system.

Mr. POLK. What type would you suggest?

Mr. WILLIAMS. That would vary, depending on the areas.

Mr. POLK. As you know, our Ohio farmers are gradually getting to a 4-year rotation. Before, they followed a 3-year rotation—corn, wheat, and clover. Now they are going more and more to a 4-year rotation. I don't want to take up too much time of the committee, but I do have 2 or 3 other questions. First, Mr. Williams, are farmers, through their county and State committees, going to be able to recommend to you any type of conservation program they want for 1954, or must their recommendations conform to the standards set forth in ACP Memorandum No. 5?

Mr. WILLIAMS. They are going to be able to, and we have strongly encouraged them to make recommendations of any sort as to the type of program proposed in this particular memorandum or any other types of practices which they felt should be included in the program.

Mr. POLK. Will the farmers' recommendation be given favorable consideration?

Mr. WILLIAMS. I suppose, Mr. Polk, that we will have all kinds of recommendations that will cover the entire waterfront, and ultimately there has to be a decision—it is made each year—as to the types of practices that will be included. For example, in past years after the recommendations came in from the States, the same fundamental procedure that we are using this year, after the recommendations came in from the States they were reviewed by the Agricultural Conservation Program Branch of PMA and by the Production and Marketing Administration and by the Secretary, and finally decisions were made, in past years, by Secretary Brannan with respect to the types of practices that would be included in the bulletin. When that bulletin was then printed in the Federal Register it became the program for that year, then the States and counties could select from

the practices included in that program the practices that they most wanted for their particular States, counties, and farms. Now there is no change in that procedure proposed in this arrangement. We have suggested in this memorandum that certain types of practices—the repeat types of practices that occur year in and year out, the maintenance types of practices—we have suggested for consideration that those types of practices be eliminated from the program of financial assistance.

Mr. POLK. Just another question along the same line. If the majority of the states recommend the same type of program which they now have, will that be the type of Agricultural Conservation program you will have in 1954, or will Secretary Benson insist upon this type of program as outlined in agricultural conservation program memorandum No 5? In other words, if the majority of the Midwestern States—and I think that my questions are more applicable to that area—if the majority of those States decide that they want to have a program for applying lime or applying phosphate or potash, or turning under green manure crops, some of the practices that are most needed out in that area and those various States do make recommendations along that line, what would be your attitude on it?

Mr. WILLIAMS. Mr. Polk, I do not know that I could give you a final answer on that. I am sure that full and adequate consideration will be given to all of the recommendations submitted to Washington and I am sure that each of the state committees, supported by the extension directors and the Soil Conservation Service people and Forest Service people who are giving consideration to these problems at the State level, they will probably do a certain amount of screening on the recommendations that come from the counties to the States and then this group will make a consolidated recommendation to Washington with respect to the type of program that should be represented.

I can only say this: That until we know the final type and size of the program indicated by the Congress for the next year, we will not be able to make those decisions.

Mr. POLK. To summarize your reply to that question, you are saying that this memorandum No. 5 is not a hard and fast rule?

Mr. WILLIAMS. That is correct.

Mr. POLK. But that it is a suggested program?

Mr. WILLIAMS. That is correct.

Mr. POLK. The way it reads "Guide for Development of County and State Recommendations for 1954 Agricultural Conservation Program, National Bulletin and Tentative State County Programs." As one reads this, or at least as I read it, I got the impression that this was a hard and fast rule and that only the practices included in this 23-page memorandum, that only those practices were the ones that you approved here at the Washington level. Am I wrong in my interpretation?

Mr. WILLIAMS. You have been misinformed, Mr. Polk, if that is your understanding.

Mr. POLK. It was not a case of anyone informing me or misinforming me. It was my impression as I studied this—I tried to find out which ones of these projects would be applicable to the nine counties that I represent and I find very, very few projects suggested in this

guide that we can use there in southern Ohio. We need lime and we need fertilizer, and those are our main needs, and I wish you would point out to me the places in this memorandum No. 5 which authorize the use of lime and fertilizer. You may not be able to do it right now, but if you could point it out it would be helpful.

Mr. WILLIAMS. I can supply it for the record.

Mr. POLK. I would like to know where in this bulletin is spelled out provisions for applying lime and fertilizer materials, for applying phosphate, that is, 20 percent P_2O_5, or potash, that is 20 percent K_2O, or in turning under green manure crops. I would like also to include seeding increased acreages of legumes and grass. Those are the five items that are most popular in my district and those are the things that I am most vitally interested in. I couldn't find anywhere in this bulletin any reference to those things. It would look like we are more or less out in the cold so far as the type of practice we want to use in southern Ohio is concerned.

Mr. WILLIAMS. All of the vegetative practices are labeled A–5, A–6, A–7, A–8, A–9, A–10, and so forth.

Mr. POLK. Will you give me the pages on those, please?

Mr. WILLIAMS. Beginning on page 10, continuing through page 14. You will find that lime and fertilizer needed for the establishment of vegetative cover is included as a portion of these practices. I want to make this clear: It is not included as a separate practice in itself. In other words, just applying fertilizer was not included as a separate conservation practice. Ordinarily fertilizer can be used for production or it can be used for conservation. If it is a conservation practice, it was our thinking—and we wanted the recommendations on that—that it ought to be associated with the type of conservation practice that would bring about the desired result.

Mr. POLK. Is it your thinking that our soils do not need any more lime?

Mr. WILLIAMS. Not at all, Mr. Polk. I think they need a great deal of lime.

Mr. POLK. Why, then, do you not include agricultural conservation program payments for the application of agricultural lime?

Mr. WILLIAMS. It is included, Mr. Polk, under the types of practices that I have pointed out here. In other words, the required amount of lime or the required amount of fertilizer, based on the soil test as to whether it is needed or not, is permitted and is a part of the cost of establishing the practices that I have indicated.

Mr. POLK. Will you point out please just where that is?

Mr. WILLIAMS. Practice A–5 on page 10, under the——

Mr. POLK. That is "Establishing permanent soil and water levels to dispose of excess water without causing erosion." That won't help us in Ohio because we do not have too many of that sort of problems.

Mr. WILLIAMS. The next one is A–6, at the bottom:

Establishing a permanent cover of perennial legumes, or perennial grasses, or a mixture of legumes and perennial grasses in orchards and vineyards for control of erosion.

Mr. POLK. That is a very insignificant part of our agricultural program in Ohio—orchards and grasses and vineyards.

Mr. WILLIAMS. On page 11, A–7, lime and fertilizer are recognized as a part of practice A–7 which is:

Establishing a permanent cover of perennial legumes or grasses, or mixtures of legumes and perennial grasses on severely eroded abandoned cropland or on cultivated land so subject to erosion, or with soils so shallow, alkaline, or incapable of drainage that their use should be changed from cultivation to permanent cover.

I am sure there is a significant amount of that in Ohio.

Mr. POLK. Yes, that is true, but in many, many counties, for instance in my district, I think that this particular section A–7 would not be applicable to more than three or four counties of the nine counties that I represent. In other words, it would be only in that area along the Ohio River where there is great erosion, that this particular type practice would be applicable, and only those people would get any lime. In other words, as I understand it, as I have read this memorandum, lime is being used incidentally only to the establishment of grass for the filling-in of gullies or the control of erosion on those very badly eroded areas, and we are leaving out all of the level lands where they like to apply some lime each year for their normal agricultural production. Is that not right?

Mr. WILLIAMS. I believe your statement is correct: that it did not contemplate in this guide, although it may be in the program after the recommendations come in, I am not sure of that, but insofar as this guide is concerned, which was not intended to be an all-inclusive list of practices, the lime and fertilizer both are suggested as associated with the types of practices in which they are needed as a part of establishing a conservation practice. Specifically we did leave out the practice which would be the topdressing of fertilizer for production, or maintaining an established seeding practice because the Congress had indicated its desire, I think ever since 1944, in appropriating funds, that this program be geared toward conservation objectives and away from the income supplement objectives.

Mr. POLK. I am just wondering, Mr. Williams, how you can say that Congress has indicated objections to lime when every year the Congress has appropriated—in recent years anyway—a sum of $250 million for that type of practice—that is, lime and fertilizer, and all of these things.

We have never taken an attitude, to my knowledge, in opposition to the use of agricultural lime and I am sure that our farmers are very much interested in the use of lime. Our farmers realize that our soils are being depleted of lime every time it rains. The soil is being constantly depleted of lime. Unless there is some incentive, to get farmers to buy more lime and apply more lime to their soil, we are going to be in a very serious situation.

As I mentioned a while ago, Ohio farmers never purchased more than 400,000 tons of lime prior to the agricultural conservation program when we got it up to 2 million tons and we should go much higher and it seems to me it is a very bad recommendation for the Department of Agriculture to make—to say that you are not going to recommend the use of any agricultural conservation program payments for direct applications of lime.

The same, I think, could be said of potash and phosphorous. We need those things in our soils. The farmer ordinarily is not going to buy as much lime as he needs unless he has a little incentive.

Those incentive payments do not amount to very much—$40 or $50 I think is the average in Ohio—but if he knows he is going to get a little money from the Government, he will go and buy maybe 2 or 3 or 4 times as much lime for application on his farm—2 or 3 times as much if he gets payments from the Government. The Government payment is insignificant so far as the total lime application is concerned but it is an incentive and I think we should encourage it.

I believe we should make every effort to get the farmers to use more lime. I would like, in conclusion, in view of what you have said, Mr. Williams, I would like to suggest that a directive or a memorandum be sent out to all of the agricultural conservation program, PMA committeemen, advising them that this memorandum No. 5 is not a hard and fast rule and that they may make suggestions along the lines that you have suggested here, because the folks back home think that they cannot add anything to this program, that this is a program that has been handed down from up above, that there is nothing they can do, except to pick out items that you have included here and that they cannot include anything else.

I think you should advise them as to what they may do. If they can have the privilege of recommending lime and fertilizer and green manuring, I think they should know about it because I am sure they do not know about it at the present time.

Mr. WILLIAMS. Mr. Chairman, just one more comment, if I may on that point. Since this memorandum was issued, Mr. Polk, we have done almost identically what you have suggested here, except that instead of being in a memorandum we have had 5 meetings in the country, 2 of which were at Denver, 1 was in the Midwest, at which the extension director and the chairman of the State PMA Committee from Ohio were present, and 1 meeting in New York City and 1 in New Orleans, in which this whole suggested guide was discussed in detail and it was emphasized that this is purely a suggestion and is not an all-inclusive list, and I am sure because the representatives from Ohio at that meeting indicated to me that they understood the situation.

Since this memorandum was directed to them in the first place, and theoretically has not been distributed beyond those committees and agencies working on it, to get suggestions, I am sure there is no reason why they do not understand that now. They might not have fully understood it at first, before we had these meetings. I am sorry if they did not.

The CHAIRMAN. Mr. Williams, could you return in the morning at 10 o'clock?

Mr. WILLIAMS. Yes, I believe I can.

The CHAIRMAN. This is the day on which the House has its Memorial Service. I think most of the members would like to attend that service. In order to do that we will have to quit a little bit early. If you could come back tomorrow we would appreciate it and we will question you further at that time.

We will recess until tomorrow morning at 10 o'clock.

(Whereupon, at 11:50 a. m., the committee adjourned, to reconvene at 10 a. m., Thursday, May 7, 1953.)

33123—53——14

SOIL CONSERVATION AND WATERSHED PROGRAMS

THURSDAY, MAY 7, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 a. m., in room 1310, House Office Building, Representative Clifford Hope (chairman) presiding.

Present: Representatives Hope (chairman), Hoeven, Lovre, Belcher, McIntire, Golden, Harrison, Wampler, Abernethy, Albert, Abbitt, Polk, Wheeler, and Thompson.

The CHAIRMAN. The committee will come to order. Before calling on Mr. Williams to resume his testimony, the Chair desires to place in the record a statement on behalf of the American Watershed Council, Inc. made by Mr. E. R. Cotton, the president of that organization. Also, a letter by Mr. R. W. Eshmeyer, executive vice president of the Sport Fishing Institute. Without objection, both of these documents will be made a part of the record at this time.

(The documents referred to above are as follows:)

STATEMENT OF THE AMERICAN WATERSHED COUNCIL, INC., BEFORE THE HOUSE AGRICULTURE COMMITTEE, MAY 5, 1953

My name is E. R. Cotton. I am president of the American Watershed Council, Inc., of Washington, D. C. The council is a non-profit association composed of local watershed organizations, interstate compacts, and associate members from business and industry. We represent a broad interest in all phases of water and related land considerations including flood prevention, industrial and domestic water supply and land use, forestry, and related agricultural considerations.

The American Watershed Council subscribes to the following fundamentals:

1. We believe in complete development of land and water resources on a river-basin and subdrainage watershed basis.

2. Watershed development programs should be the basic responsibility of the people residing in the watershed.

3. Widespread private and public benefits accrue to the majority of citizens from proper land use and the proper direction and control of water behavior in each small watershed.

4. The control and marshaling of streams from their headwaters to the mouth involves a delicate balance of hydrologic, ecologic and human factors.

5. A comprehensive program meeting the needs of an area must be formulated prior to actual development work.

6. It is essential to encourage a broader public understanding of land and water resource problems as they relate to agriculture, business, industry, recreation and the individual citizen.

The foregoing principles are in most ways in agreement with the views of the National Informal Citizens Committee on Watershed Conservation stated here today.

I would like to emphasize that the care and handling of land and water resources must be considered in light of all other problems facing the Nation in these critical times. We must also appraise proposals with due awareness that no single

solution to land and water problems necessarily applies to all sections of the nation. We must consider also that as States and area organizations take on increasing responsibility, that realinement of Federal activities regarding natural resources must take place with proper consideration of course to national interests.

SPORT FISHING INSTITUTE,
Washington, D. C., May 6, 1953.

Representative CLIFFORD R. HOPE,
House of Representatives, Washington, D. C.

DEAR CONGRESSMAN HOPE: I have read your opening statement on the hearings on soil conservation and watershed programs as proposed under your bill, H. R. 4877. I wish to commend you and the Committee on Agriculture for this very constructive proposal in relation to the planning and carrying out of upstream watershed improvement and soil conservation programs.

The Sport Fishing Institute, of which I am executive vice president, is very much interested in good watershed conditions. We know that clear streams and good fishing are only maintained in those sections where the lands are managed in such a way that the soil is kept in place. Therefore, although the members of my organization may not be directly concerned with the worthy purposes covered in H. R. 4877, we are, nevertheless, strongly interested in the bill because of its indirect effects upon the water supplies and the fishing resources and recreational values.

However, it appears to me that the bill would be strengthened if a provision were added for direct action on the part of the Secretary of Agriculture on public lands such as the national forests. It seems to me that in cases of large blocks of national forest land, much of it isolated from communities, there would be a lack of community interest and support such as the bill rightfully contemplates on agricultural lands. Then, too, on much of this land, its primary resource, water, is of interstate significance and goes far beyond the local community. Therefore, I should like to propose that the committee include another section in the bill which would provide for the Secretary of Agriculture to initiate and carry out flood-control measures where the lands involved are either predominantly or exclusively Federally owned and under the jurisdiction of the Secretary of Agriculture.

Sincerely,

R. W. ESCHMEYER,
Executive Vice President.

The CHAIRMAN. Mr. Williams, if you will come forward we will resume our questioning.

STATEMENT OF D. A. WILLIAMS, CHIEF, AGRICULTURAL CONSERVATION PROGRAMS—Resumed

The CHAIRMAN. Mr. Polk has some questions to ask at this time.

Mr. POLK. Thank you, Mr. Chairman.

Mr. Williams, the reason for my questions is that I am deeply concerned about the soil-conservation problem. I believe that soil conservation is probably the most important problem facing American agriculture at the present time. In looking over your memorandum No. 5, about which we were talking yesterday, I have come to the very definite conclusion that only those practices which you consider to be permanent in nature will be approved by the Department. Is that correct?

Mr. WILLIAMS. That is the general objective, Mr. Polk. I am not sure what the final conclusions will be. As I indicated yesterday, this guide is a tentative proposal. Until the Secretary determines, after the recommendations are in from the States, just what practices should be included after full consideration, I couldn't say whether this will be limited to the types of practices that are in this guide or not.

Mr. POLK. If that is true, then we must come to the definition of what we mean by "permanent practices." This morning in reading over your testimony before the House Committee on Appropriations, in part 4 of the House Appropriations Committee hearings, on page 1808, in reply to a question from Mr. Whitten you are quoted as saying, in answer to this question:

What would be your idea of "considerable time"?

speaking of permanent annual practices and so on?

Mr. WILLIAMS. Probably anywhere from 3 years on up in terms of residual benefits of the practice, although that 3 years is purely an indicator and not any fixed idea.

I infer from your testimony before the Appropriations Committee that if a practice has residual benefits for 3 years that you might consider it to be a permanent practice. Is that right?

Mr. WILLIAMS. I believe that serious consideration would be given to it, Mr. Polk.

Mr. POLK. I agree with you, Mr. Williams. I think that we should not limit our so-called permanent practices arbitrarily to practices like building dams and those other structural practices outlined in memorandum No. 5. I am glad to hear you say that if a practice has residual benefits covering 3 years that you would favorably consider it as a permanent practice. Are you familiar with the experiments that have been carried on by the Ohio Agricultural Experiment Station with reference to the permanent benefits of agricultural lime?

Mr. WILLIAMS. Yes, in general. Not in all details.

Mr. POLK. Would you consider that those experiments at the Ohio Experiment Station are accurate, that they are reputable, that they are considered to be good experiments? In other words, experiments upon which you would rely so far as accuracy is concerned?

Mr. WILLIAMS. I would have no reason to question them, Mr. Polk.

Mr. POLK. I have before me a copy of Ohio Agricultural Experiment Station Bulletin No. 381 which is a summary of 30 years' work at the Ohio station, with reference to the maintenance of soil fertility. On page 251 of this bulletin, which, may I say, was published in 1924, on the question relating to the effect of lime, I believe you can see what I am getting at. I contend that the application of agricultural lime is not an annual practice. I am basing that upon the usual farm practice in Ohio. We ordinarily never lime more often than once in 4 years. In fact, once in 5 or 10 years is, I believe, a very usual practice in Ohio. So we feel—I feel—that agricultural lime should be considered as not an annual practice, but as a permanent practice.

In support of my contention I wish to read just a few sentences from this Ohio bulletin on the effect of lime. May I say that the experiments discussed here were started in 1893. This is a summary of the results after 30 years. This is a quotation from the bulletin:

At the time these experiments were planned, the deficiency of the soil in lime had not been detected, as clover had been growing luxuriantly when other fertilizing elements were furnished. But within a few years the clover crops began to fail and in 1900 the experiment was begun of liming half the land as it was being prepared for corn, quicklime being applied to the west ends of the plots, fertilized and unfertilized alike.

May I say that the rotation that was followed on these plots was corn, oats, timothy, and wheat, if I recall. I would like to point out that quicklime was used as the liming material. Back in 1900 we did not have very much ground limestone; probably none at all.

> The liming was begun on section A and was continued on the west ends as the other four sections came under corn. Then it was transferred to the east ends in order to make sure that the differences were not due to variations in the soil.

This is a significant statement:

> The 3 sections that had had 1 liming on the east ends, however, still showed the effect of that treatment.

This was written in 1924. This 1 liming which was applied, quicklime was applied in 1900 on these 3 plots, and the station states that the 3 sections that had had 1 liming in 1900 still showed in the crops that were harvested in 1923 the effect of that 1 treatment.

I submit that, Mr. Chairman, as evidence that lime has a permanent value as a soil-conservation practice. I believe that these were reliable tests by the Ohio station. As far as I know they have never been questioned. Dr. Thorne and Mr. C. G. Williams, who were directors of the station during the time these tests were carried out, have a national reputation as agricultural soil experts. So it seems to me that there is ample ground for inclusion of agricultural lime as a permanent practice. It is certainly not an annual practice.

I would like to point out further that in these tests that were carried on in Ohio, in view of the fact that they used quicklime, which as you know is probably more soluble than ground limestone, it would be more leachy, there would be more loss from leaching of the quicklime than would be true under our modern practices today by use of the ground agricultural limestone which is less soluble than quicklime. Would you care to comment on that?

Mr. WILLIAMS. Yes, I would like to, Mr. Polk. Certainly I do not disagree in any respect with the findings. I think all of us who are concerned with conservation recognize the absolute necessity for having lime as a part of the total conservation job. In fact, Agricultural Conservation Program Memorandum No. 5 recognizes the place for lime in a conservation program. Whether it goes far enough, whether it should be specifically separately mentioned, perhaps is a legitimate question. It is true that in this tentative guide the use of lime and fertilizer was indicated as a suggestion in connection with the initial establishment where needed.

In other words, based on soil tests to determine what the need is, and then in connection with the initial establishment of permanent conservation measures, not as a separate practice apart, unrelated to other conservation objectives. Whether that is the best way to do it, the right way to do it, I think needs a lot of study. I am sure that the final decision with respect to how it should be in the 1954 Bulletin has not been made. I am sure it will receive full consideration. I do think, Mr. Polk, that there is a question also not only of whether or not lime and fertilizer, when used in conjunction with a conservation practice, are desirable practices, but there is also the question of the extent to which the Federal Government should provide financial participation in that program.

That is something, I think, that is a policy matter for the Congress to determine over a period of time. I would like to point out some

information that would indicate to me that the big increase in the use of limestone that you referred to yesterday morning certainly is not solely due to agricultural conservation program payments. I would be the last to try to claim credit for agricultural conservation program as being the sole factor in the big increase.

Mr. POLK. Don't you think that these agricultural conservation program payments have been of great value as incentives to cause farmers to buy more lime than they would have purchased without agricultural conservation program payments.?

Mr. WILLIAMS. I think without question they have been an incentive in that direction, and I think the very fact that farmers have, as you pointed out yesterday, perhaps bought two or three times as much lime as they otherwise would have bought, indicates that they recognize the need for it and are willing to make an investment of their own funds to do it. Where is the minimum level of Federal participation so that the desirable type of practice goes forward? I think that is the sort of question we are faced with. I would like to point out in connection with several different items here, the trend since 1935—you see 1936 was the first year in which there was financing assistance under the Conservation and Domestic Allotment Act. So I have taken the figures for 1935, the reported use of minerals and lime, and also the reported figures for 1951. This is for total use, not just agricultural conservation program.

For example, the use of nitrogen in 1935 was 312,000 tons. In 1951 it was 1,238,000 tons, or an increase in that period of some 300 percent. There has never been any financial assistance available for nitrogen, as you know. Phosphate—

Mr. POLK. Only under green manuring. When you turn under green manuring there is some nitrogen.

Mr. WILLIAMS. Not as a commercial product. These are commercial figures. Phosphate went from 2,985,000 tons in 1935 to 10,550,000 tons in 1951, or an increase of 254 percent as compared with the 300 percent on nitrogen. There has been financial assistance on phosphate most of the time—all of the time, I believe, since the beginning. Potash went from 614,000 tons in 1935 to 2,760,000 tons in 1951, or an indicated increase of 350 percent. Potash likewise has had a degree of agricultural conservation program financial assistance. Reported use of lime, 3,505,000 tons in 1935 and in 1951, 27,358,000 tons or an increase of 680 percent. The increase on lime has been more spectacular than it has on the other elements.

I do not know what the sound assumption would be, but I think we can draw an inference, at least, that there would have been a substantial increase in the use of these elements if there had been no financial assistance. Whether that would account for say 300 percent of the increase on lime, or some other figure, I do not know. It would be purely conjectural. I do want to point out that with respect to these various elements, taking 1950 and 1951 figures of agricultural conservation program participation, the participation on nitrogen of course was zero percent.

On phosphate it averaged 29 percent of the total on which there was agricultural conservation plan participation; on potash it was 14 percent; on lime, the biggest item with indicated agircultural conservation plan participation, 78 percent of the lime that was reported

used in 1951 on a national basis was related to agricultural conservation plan participation. The very fact that farmers have come to recognize the necessity for the use of minerals as well as organic materials as a part of the conservation job is, I think, without question. I think the question that faces us is what is the right thing to do with respect to Federal participation and how best to do it. Should the Federal Government continue to participate in more than a one-time application of lime? Should that be associated with the establishment of vegetation? Or should it be otherwise? Those are questions, I think, that are very significant. Should there be financial assistance say on the repeat application of lime even every five or more years, or whatever it might be? Can the Federal Government afford that type of thing?

Those are all very pertinent questions. I do not have all the answers to them, either.

Mr. POLK. Can we afford to permit our soil to become seriously depleted? I have been bothered very much by some of the provisions of Memorandum No. 5, particularly with the one that you read yesterday, A–7, on page 11 of the memorandum, that deals with establishing permanent clover, legumes, and grasses on soils that are shallow, or soils that had been very seriously eroded. In other words, it seems to me that the policy followed in this memorandum is to permit our soil to become very seriously eroded or very seriously depleted and then start working on it.

My theory is that it would be much better to use some lime and some other practices along that line before our soils become completely eroded or completely depleted. We are sort of locking the door after the horse has been stolen if we wait until our soils are completely eroded and then start a conservation practice. I would like to see a program followed whereby the soils are maintained at a high level of productivity. It seems to me that the approach in memorandum 5 is not along that line.

Mr. WILLIAMS. I would have to disagree in part, Mr. Polk. This particular practice, A–7, is designed to meet that kind of problem where land should be converted to noncrop use for several reasons. Another part of the program, I believe it is A–10, indicates financial assistance as a possibility, and the suggestion, as I pointed out yesterday, that it be a new practice that has not been in the bulletins in recent years, suggests the possibility of financial assistance for the establishment of long-time rotations on cropland that is good cropland and would help to maintain the fertility and permeability and so forth of that soil.

That practice also involves the use of lime and fertilizers. Then there is a third one which is highly significant that I did not get to mention yesterday, but I believe it is practice A–11, the pasture-establishment practice.

Mr. POLK. A–11 refers strictly to rangelands. I am not too familiar with rangelands.

Mr. WILLIAMS. A–9 is the pasture-establishment practice, Mr. Polk. In other words, the vegetative practices that are applicable to the land that is in cultivation or has been in cultivation throughout much of the country.

Mr. POLK. A–9 says:

This practice is applicable only to noncrop land suitable for and to be used permanently for pasture where the present vegetative cover is inadequate for runoff or erosion control.

I have no complaint about that. I am thinking about the agricultural area that I represent where we do not have too much of that type of problem. I don't think there is any substantial area in the Sixth Congressional District of Ohio where the practice A–9 would be applicable because it says that—

This is applicable only to noncrop land.

Mr. WILLIAMS. In other words, land that is in cover now. It may be in pasture now, or it may be in some type of hay crop. If the cover there is inadequate for the control of erosion and runoff, that particular practice would permit the use of financial assistance as a part of getting the initial establishment of good cover accomplished.

Mr. POLK. This further says:

This practice is not eligible on land which, if cleared, would be suitable for cultivation.

I would also like to go back to A–10, which you mentioned awhile ago. That says:

This practice is applicable only in counties or parts of a county where it is determined that perennial grasses, perennial legumes, or mixtures of legumes and perennial grasses are not now generally used in crop rotations for soil improvement.

I think that that particular proviso would eliminate every one of the nine counties that I represent because in all of those counties for 50 years legumes and grasses have been used in crop rotation. That is the complaint that I have, that you have written in so many restrictions that you eliminate a great part of the great agricultural area east of, may I say Kansas, the home State of our distinguished chairman.

It seems to me that these practices that you have outlined here are very largely restricted to areas in some of the Southern States where very serious erosions take place, and that those of us who represent the breadbasket of America, as we like to speak of it, are left out in the cold. In other words, you have written so many restrictions in it that we are going to be practically eliminated so far as participation in your program is concerned.

As I said yesterday, I have here a list of the practices which it appears that you are eliminating from the 1954 ACP program. That includes applying liming materials in Ohio, and there were 58,950 Ohio farms where this practice was carried out in 1951. Applying phosphate is eliminated. This practice was carried out on 51,710 farms in Ohio.

Applying potash is a practice that is eliminated and was carried out on 43,493 Ohio farms in 1951. Turning under green manure crops is eliminated, and that was carried out on 23,998 Ohio farms. There are several others. Then going to the practices which are retained in the program, we have establishing sod waterways, a good practice, but it was carried out on only 1,780 farms in Ohio in 1951. Construction of diversion and spreader ditches, dykes and terraces, was carried out on only 139 farms. Constructing drainage ditches,

a good practice, was carried out on 593 farms. Dams for livestock water, a good practice, was carried out on only 404 farms in Ohio. Developing springs and seeps, another good practice, was carried out on only 42 farms in Ohio. Improved stands of forests, trees, another good practice, was carried out on 7 farms. Constructing terraces, carried out on 61 farms. Stripcropping, not on contour, carried out on 185 farms.

I mention these to show that the practices that you are approving for 1954 were carried out on a few farms, only a few farms. As I indicated yesterday, the total of the practices that you have approved for 1954 would be carried out, using the figures for 1951, which are the latest available, only 17,881 farms would meet the requirements under the 1954 proposed program, while under the old program 184,755 farms participated in the program.

In other words, there is a difference between 17,881 and 184,755. In other words, you have eliminated over 90 percent of the practices that were carried out in Ohio in 1951.

Mr. WILLIAMS. May I comment on that, Mr. Polk? I believe there is some misinterpretation of the figures. Yesterday afternoon I had the statistics analyzed with respect to Ohio, the 1951 program, and I believe those are the figures that you are referring to. There were actually only 92,617 farms that participated in the program in Ohio in 1951. The figures that you have been reading are practices on farms.

Mr. POLK. You must remember that on some of these practices, there is some overlapping. In other words, some of these farms had more than one practice on the farm. But I am speaking now of the total practices that were used, the 184,755, the total of all practices that were carried out in 1951, and the 17,881, the total of all practices that would be carried out under the 1951 program. I think that there are many practices on the same farm, but the result is the same. You are eliminating about 90 percent of the practices that we have been carrying out in years previously in Ohio.

Mr. WILLIAMS. I do not believe that is a correct interpretation, Mr. Polk.

Mr. POLK. I would be glad to have your interpretation. That worries me.

Mr. WILLIAMS. Our figures show that there were 46,825 farms that carried out a permanent type practice in 1951. That is a permanent type practice using the suggested guide as the criteria. That does not, as I pointed out yesterday, include all of the permanent type practices. There are many permanent type practices that were not specifically listed in the guide. There were actually only 92,617 farms that participated in the program. So that the percentage of farms that were benefiting from the program through permanent type practices is considerably higher, I believe, than your figures might indicate.

I would like to supply this for the record.

Number of farms on which conservation measures performed under the 1951 agricultural conservation program—Ohio

Conservation measure	Number of farms on which practice performed
PERMANENT-TYPE PRACTICES	
Minerals used in connection with newly established cover and pasture (estimated):	
Lime	11,790
Phosphate	10,342
Potash	8,699
Standard terraces	61
Diversion and sureader terraces	139
Contour stripcropping	1,415
Sod waterways	1,780
Dams for erosion control: Checks and drops	122
Drainage	9,524
Seeding to establish new pasture (estimated)	810
Livestock dams	404
Springs and seeps developed	42
Tree planting	1,085
Timber stand improvement	7
Clearing uneconomic woodland for pasture	605
Total of permanent-type practices [1]	46,825
OTHER PRACTICES	
Minerals used in connection with other practices (estimated):	
Lime	47,160
Phosphate	41,368
Potash	34,794
Green manure and cover crops	23,998
Seeding increased acreages of legumes and grasses	3,643
Contour farming intertilled crops	553
Contour farming close-sown crops	553
Field stripcropping	185
Reseeding pasture (estimated)	2,429
Fencing to protect woodland	198
Mulching orchards and vineyards	1,052
Total of other practices [1]	155,935
Total of all practices [1]	202,758
Total number of farms participating in the program	92,617

[1] These totals do not represent the number of farms carrying out practices since duplication exists where more than one practice is carried out on a farm.

Mr. WILLIAMS. Also I would like to point out what the State committee in Ohio, supported by the State group which includes the Extension Service, the Soil Conservation Service and others, in making up estimates of needs, estimated as of January 1, 1950, as the needs for the permanent-type practices. I want to point out a problem that exists in Ohio, and Ohio is not the only State this problem exists in, but I think it is a problem that all of us face with respect to how best to spend money that may be available for conservation work.

There are a number of practices. In fact, this whole page of practices of the so-called permanent type, which were included in the needs. I mentioned 2 or 3 of them yesterday. I could mention many more. This matter of establishing new pasture, I don't know what the situation may be in your congressional district, Mr. Polk, but in the State of Ohio——

Mr. POLK. We are trying to encourage the farmers to put more land in permanent pasture. We need to apply lime in order to do that. That is one of the reasons I am so insistent that lime be oncluded because we have to have lime in order to get these permanent pastures.

Mr. WILLIAMS. That is right, and that is our intent, to have lime in the program for that establishment. For instance, in Ohio, the statewide figures indicated as of January 1, 1950, the need of 1,475,000 acres of new pasture established. Actually there were only acres accomplished in the whole State of Ohio, or five-tenths of 1 percent in 1951. Timber improvement there was a need for 200,000 acres, and only 4,000 acres were accomplished in 1951.

Permanent cover on cropland, there was a need of 120,000 acres, and there was no assistance went into that in 1951. The point that I want to make is that there is an indicated need of a large amount of permanent-type practices and it appears that perhaps a good bit of money may have been going into the repeat-type of practices. Whether we label lime as a repeat practice or not is beside the point at the moment. But it appears that a great deal of money has been going into repeat-type of practices nationally and the question is whether or not the funds should not be going into the practices, whatever they may be, that provide the more enduring conservation benefits in the public interest, and in the interest of the farmer. In principle, that is all we are suggesting in this guide.

Mr. POLK. Don't you think that, in view of the experiment station experiments in Ohio, which show clearly that one liming has an effect that extends over a period of at least 23 years, that lime is a permanent practice? We know that all of the agricultural colleges and experiment stations recommend that we immediately apply 395 million tons of lime to the cropland of America, and that we should apply 47 million tons annually in order to make up for the depletion from erosion? Don't you think that we should consider it because of the importance of lime in our agricultural economy so far as the production of good crops is concerned? Don't you think we should consider the application of lime as a permanent practice?

Mr. WILLIAMS. I think it is so considered in the suggested guide, Mr. Polk. I am not disagreeing with you that the effects of lime continue over a period of years. But I think that lime may be used in a number of different ways and for a number of different purposes. Our suggestion here is, and our thinking is, that insofar as agricultural conservation program funds are concerned, the financial assistance under that should go into that part of the lime application which is directly, specifically, and tangibly connected with the conservation objective, and not an income supplement or a production-type of assistance.

The Congress has steered us in that direction every since 1944. Just where to draw the line is still an open question, I think. There are many facets to that, as to just how that is handled best. I think certainly we do not disagree on two principles with respect to lime: First, that financial assistance should not go into it if the lime is not needed.

Mr. POLK. There is no question but what the lime is needed. The report of the agricultural experiment stations and colleges definitely show that there is a need right now, or there was a need in 1951. I believe that is the date of the report, on 395 million tons.

Mr. WILLIAMS. Certainly there is a general need. I am thinking now of the individual farm and the individual field—the assistance that an individual farmer might receive from this program. If he

has lime, or if the lime content is sufficiently high, should there be further assistance going into it from the Federal Government?

Mr. POLK. Do you think the farmer will use liming as one of the established practices if he knows he does not need lime? I do not think so. I think the farmer knows best what his farm needs all the time. I think that instead of issuing orders here in Washington to tell the farmers what they should do, that we should give the farmer more, say, about the type of practices. That is my objection to memorandum 5.

It seems to me that here we are issuing an order from the top which limits him in such a way that he cannot use the practices that he needs on his farm, that he knows he needs, the practices that he wants to carry out. I believe that is all I have, Mr. Chairman. I want to thank you.

Mr. WILLIAMS. I would like to make one further comment, if I may. I endeavored to point out as clearly as I could yesterday, Mr. Polk, that there is no intent or no desire on the part of myself or the Secretary that this Memorandum No. 5 was in any way closing the door to recommendations or suggestions of what the program ought to be. In fact, it was a specific invitation for such suggestions.

The decisions have not been made as to the practices that will go into the 1954 program and will not be made until the recommendations are received from the States. I hope that gives you assurance on that point.

Mr. POLK. Mr. Williams, I hope that you will reconsider the question of lime and allow the farmers to have this practice which they have considered to be so very valuable in years past. Thank you.

Mr. WILLIAMS. I would like to add this table to the record. It is on conservation needs for permanent practices in Ohio.

The CHAIRMAN. That will be made a part of the record at this point.

(The document referred to above is as follows:)

Estimated amounts needed, as of Jan. 1, 1950, of selected permanent-type conservation practices—Ohio

Practice	Unit	Amount needed	Amount performed in 1951	1951 performance as a percent of needs
				Percent
Standard terraces	Acre	1,500,000	1,137	0.1
Diversion and spreader terraces	1,000 linear feet	59,000	145	.2
Contour stripcropping	Acre	3,500,000	18,518	.5
Sod waterways	do	170,000	1,022	.6
Tillage operations on pasture	do	300,000	0	0
Dams for erosion control—storage type	Number	23,000	0	0
Riprap	Total credit	750,000	0	0
Drainage	Acre	3,012,743	85,679	2.8
Establishing new pasture	do	1,475,000	7,400	.5
Livestock dams	Number	25,000	404	1.6
Springs and seeps	do	3,000	42	1.4
Control of competitive plants	Acre	150,000	0	0
Tree planting	do	1,048,428	5,397	.5
Timber-stand improvement	do	1,600,000	99	(1)
Clearing land for pasture	do	200,000	4,112	2.1
Permanent cover on cropland	do	120,000	0	0
Liming materials on newly established pasture	do	3,500,000	190,000	5.4
Phosphate on newly established cover and pasture	do	370,000	148,000	40.0
Potash on newly established cover and pasture	do	370,000	143,000	38.6

[1] 0.05 or less.

The CHAIRMAN. Mr. Williams, in this document that you have been discussing, on page 4, there is a timing schedule set up which shows the various steps that are to be taken in working out this program. What I wanted to ask you is this: Is that any different from the practice in previous years? In other words, has this same program been followed all the time with respect to submitting the tentative program to the States and county committees and getting their recommendations and working out the final program after those recommendations are received.

Mr. WILLIAMS. It is essentially the same, Mr. Hope. The timetable varies only by dates, which of course are different from one year to another. It was not possible to start this process quite as early this year as it was possible to start it a year ago. Last year the States and counties were asked to submit their suggestions for the national program, beginning, I believe, in February. The request was sent to them about that time. It was suggested to them that they base their recommendations upon the provisions of the then 1952 national bulletin.

In other words, the procedures and the practices included in that bulletin, to make whatever suggestions they might have. This year—because of the lateness of the time, and being able to get started at the request, and in view of the recommendations the Secretary had made with respect to the program for 1954—it was felt desirable to make a suggested guide of types of things that might be considered as pertinent to the 1954 program but to specifically request their reactions on it. That was followed up, as I pointed out yesterday, by the five meetings that we have held around the country in which all of the agencies at the State level participated, and they all thoroughly understand that this is purely a tentative arrangement.

I would like to ask Mr. Ritchie, if I may, Mr. Chairman, to comment further with respect to time schedules in the past. Mr. Ritchie has been connected with this program for several years. I have only been associated with it for a fairly brief time.

The CHAIRMAN. Very well. We would be very glad to have Mr. Ritchie make an explanation at this time.

Mr. RITCHIE. Mr. Chairman, the time schedule, as Mr. Williams has pointed out, for the obtaining of county and State recommendations gives a little later date than normal. Ordinarily this work starts about February and the State and country recommendations—the State recommendations are in to the Department by somewhere around the first of June.

We found over the years that in order for the necessary attention to be given at the State and county level in the final decisions and what their next year's program will be, and to make all necessary arrangements to get that program in operation, that we need to have available for them by about July 1 of the preceding calendar year the national outline and guide of practices from which they develop, finally, their individual State and county programs.

Normally, we ask for these recommendations by the 1st of June. Because of the lateness with which we have started, we have asked for them by the 15th of June, recognizing that that will require a very much restricted time for us to finally get the national program in operation.

Mr. WILLIAMS. Does that answer the question?

The CHAIRMAN. I think it does. Of course there has been criticism in the past that when the farmers make recommendations they are not given proper consideration. That is a criticism that has come to me from local committees, that they make recommendations and they never hear anything more about them. Perhaps they do not know whether consideration has been given or not, but they do not feel that the proper consideration has been given, or that they have secured the results which they had hoped for in making the recommendations. I know that was one of the matters that was discussed by President Eisenhower in the campaign last fall in which he emphasized that farm programs should be farmers' programs, that farmers should have even more participation in them than they have had in the past.

I want to ask you if you intend to give real, genuine consideration to the recommendations that may be made by the local county committees and transmitted to you through the State committees in connection with this program.

Mr. WILLIAMS. That is absolutely correct, Mr. Chairman. We will give full consideration to them.

The CHAIRMAN. If you should get recommendations from States or areas that would indicate that you had overlooked some phases of the program which the State committees, or the Extension Service in that State, felt were important enough to be included at this time, if you were convinced that that was the situation, would you feel that you were bound to make a change in the program?

Mr. WILLIAMS. That would be generally correct. It is conceivable that you might get conflicting recommendations from two or more counties. So there has to be a resolution of what is the right thing to do.

The CHAIRMAN. You are saying that you would give ample and fair and careful consideration to any recommendations which may come up to you as a result of submission of this program to the State and county committees?

Mr. WILLIAMS. That is absolutely correct.

The CHAIRMAN. I have a couple of other questions. In your statement yesterday, on page 5, you suggested 3 principles that would be used as a guide in determination of the type of practices eligible for financial assistance. The first one I think is pretty clear, but I am wondering if you would give us an example of what would be considered as a practice under Nos. 2 and 3 as set out in your statement.

Mr. WILLIAMS. I would be happy to, Mr. Chairman. Let us take the practice of stubble mulch, for example, which is used considerably in the Middle West and Far West and various other places. Stubble mulch has already been adopted as a practice by the farmers in the area. It is something that has become a normal operation. It is our thinking that it would not qualify under item 2 under that principle. Whereas in an area that might be a part of a county, a whole county or several counties, perhaps the practice has not been initiated by the farmers and is something that perhaps needs some degree of consideration.

The question of whether or not financial assistance should go to that type of practice would have to be taken into account by the local committees as well as nationally. The matter of contour strip-

cropping, while recognized generally as desirable for sloping lands may not have taken hold in certain areas for various reasons. A degree of financial assistance for that type of practice might be entirely necessary to help get it initiated in an area. Once the practice has been initiated in the area, and it had become accepted by a substantial number of farmers, it would seem that the benefits of it would be rather apparent and a lesser degree, if any, financial assistance would need to go into it.

On item 3, the practices which, though essential to the public welfare, will not return sufficient short-term economic benefits to the farmer to provide the necessary encouragement to him to install them.

First, let me say that we are thinking of both 2 and 3 in conjunction with No. 1, not independently but in conjunction with it. Certainly a type of practice, let us say a top dressing of fertilizer on a pasture; it might be nitrogen or phosphate, which will give quick response that season in terms of increased grass for grazing and in itself would bring about short-term economic benefits, as compared with, say, retiring land from cultivation that takes several years for that land to get into an established vegetated cover.

The CHAIRMAN. The latter would be a practice that would come under 3, but the first mentioned would very definitely not come under that practice.

Mr. WILLIAMS. That is correct.

The CHAIRMAN. Getting back to what we were talking about awhile ago, is it or is it not true that over a period of years, say for the last 10 years anyway, it has been the practice within the Department to gradually work the program in the direction of putting more emphasis on the permanent type of practices?

Mr. WILLIAMS. That is correct. The trend has been substantial, particularly in the last 2 or 3 years. In 1951 about 35 percent of the net assistance to farmers went into the so-called permanent type practices on a national basis.

We have estimated, in 1953, that it may be as much as 57 percent of the total funds available going into those types of practices. Over the long run of years, 1936 to 1951, the average for all of those years is about 32 or 33 percent, I believe. I can supply that figure accurately but it is approximately that. The correct figure is 31 percent.

I would like to point this out, too, Mr. Chairman: Based on the conservation needs estimates that were brought up to date, a couple of years ago in the ACP branch, there was an indicated credit value need for permanent type practices that would be about twice that for the annual recurring practices.

Comparing that with how the funds have gone, historically, about 70 percent of the money has gone for the repeat types of practices and about 30 percent for the practices that provide more enduring benefits. So that it has been in reverse ratio to the indicated needs for the types of practices which the States themselves have recommended.

I believe that we could say that the trend toward more permanent type practices that has been taking place, while perhaps it has not been rapid enough in certain States, in certain areas, to overcome that situation, it certainly is in the right direction. Last year the Administrator of the program took steps to administratively limit

the amount of funds that might go into the so-called limited types of practices, or some of the recurring types of practices.

The CHAIRMAN. You are speaking of the program that is in effect for this year, 1953?

Mr. WILLIAMS. That is correct. That step was taken last year to insure that more of the funds that are available this year would go into the more permanent type practices. Similarly, particularly the Appropriations Committee of the House, has for the past several years encouraged more and more of the funds to go toward the more lasting or more enduring types of practices.

The CHAIRMAN. What has been the response of farmers as reflected by the actions or recommendations of the county and State committees toward this gradual change toward more permanent practices? Have they indicated approval or have they indicated the contrary?

Mr. WILLIAMS. By and large the indications are on the side of approval. There are some indications otherwise. But the majority of indications are very strong in favor of getting toward the more enduring and more permanent type practice work. As I pointed out yesterday, a number of States have gone a long way in that direction. For example, South Carolina this year is dropping out from their program the recurring practice of winter cover crops, annual legumes and that sort of thing, to try to use their money on the more enduring and more permanent type practices.

That trend has been picking up momentum over a period of years but I think that the encouragement that has been given by the Congress and the Administration heretofore has been very helpful in that direction. I am personally sure that the rank-and-file American farmer would like to see the financial assistance go into the most enduring possible type of conservation work.

Mr. HOEVEN. Do you feel that that goal will be achieved within the next few years?

Mr. WILLIAMS. I believe that the continued effort to bring that about would largely accomplish the result. The proposal the Secretary has made for the program for 1954 is that the program eliminate financial assistance for the repeat types of practices. If assistance was only available for the other types of practices, of course, the transition would be rapid. I do not know how many years it would take on a wide-open program basis to finally get it into the most enduring types of practices.

Mr. HOEVEN. With your program of education that is now being carried on, and the rapid increase that is being made toward permanent improvements, as you pointed out, do you not see a possibility of that happening within, say the next 5 years?

Mr. WILLIAMS. Certainly great progress could be made. I suspect that there will be an increment there of—I do not know what the size would be—that would be very difficult to get accomplished.

Mr. HOEVEN. There is a possibility?

Mr. WILLIAMS. I think there is a possibility.

The CHAIRMAN. The method has been to approach it gradually, has it not?

Mr. WILLIAMS. Yes, with the exception of the limitations that were placed in effect by the administration last year, which was a rather drastic step.

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The CHAIRMAN. That was one of the longest steps that had been taken at any one time in the program?

Mr. WILLIAMS. I believe that is right.

The CHAIRMAN. Generally speaking, the policy has been not to make abrupt changes, but to gradually work out these programs in the direction of more emphasis on the longer lasting practices, with the ultimate goal of bringing the program to a point where it would consist principally if not altogether of those practices. Is that right?

Mr. WILLIAMS. Yes, I am sure that has been the trend on a national basis. As I indicated yesterday, certain of the States moved almost entirely, rather quickly, to the permanent type practice approach, but that was not a general situation.

The CHAIRMAN. But because this is a program that recognizes that farmers should have something to say about it, and depends on the farmer's participation, you have in the past—and from what you said a while ago will continue in the future—to give due regard to the viewpoint of the farmers on this as well as other questions?

Mr. WILLIAMS. Yes, sir.

The CHAIRMAN. Mr. McIntire?

Mr. MCINTIRE. Mr. Williams, I believe you recently met with our northeast folks in New York—on April 24, to be exact——

Mr. WILLIAMS. Yes, sir.

Mr. MCINTIRE. On the basis of your statement of the importance of the recommendations of the county and State committees, if a State came in with a recommendation that was perhaps more in line with the previous programs rather than fitting into the suggested program in your guide No. 5, what effect would that have on the establishment of those practices which New England asked for in the 1954 program?

Mr. WILLIAMS. I think it would have a very substantial effect, Mr. McIntire. I cannot speak for the Secretary. I can speak for myself. I would certainly give most serious consideration to it.

Mr. MCINTIRE. You were speaking about the shifts being made by States to the more permanent type practices. Is it a fair observation that the speed of those shifts has been inherent in their type agriculture, and by the same token, the fact that other States may not have shifted as rapidly to some of those practices has been also somewhat inherent in their type of agriculture? I think your records would show that New England, by virtue of its livestock agriculture, basically grassland agriculture, has perhaps not shifted as rapidly as some of the Midwestern States.

Mr. WILLIAMS. I suspect that that is true in principle, although there are probably exceptions to it. For example, I pointed out South Carolina taking a rather positive step this year which is a little different than——

Mr. MCINTIRE. Do you not have more of a visible erosion problem in South Carolina than is inherent in our New England agriculture?

Mr. WILLIAMS. That is generally true, yes.

Mr. MCINTIRE. We have some areas, in my own county particularly, where structures are more a part of a soil-erosion program than would be true in Vermont, or Massachusetts, or New Hampshire. What would be your observation, if it is proper to ask, of New England's thoughts relative to the 1954 suggestions?

Mr. WILLIAMS. As to the applicability of the suggestions to New England?

Mr. MCINTIRE. No, the results of your conference with them on April 24.

Mr. WILLIAMS. I think it was an extremely constructive conference in which we all got a better understanding of the total situation. I am sure that the representatives of the Extension Service who were present—and Dean Carrigan, of Vermont, officially represented the land-grant-college group— and a number of other extension directors were there, and the chairmen of the State PMA committees and the staff officers, and representatives of the Forest Service and the Soil Conservation Service, explored the total field and gave consideration to what were the principles behind the suggestions contained in the guide, rather than whether this was in itself a complete thing.

I think we reached the understanding that this is not, and is not intended to be, a complete list of practices that would be applicable to any area. We were trying to express some principles.

Mr. MCINTIRE. I wonder what your thoughts are relative to that conference. I have a communication from a man whom I think is one of the outstanding farmers in my State, who says "The 1954 program has little if anything to offer to New England agriculture." He attended your conference. I wondered what the problem was as to resolving the 1954 program and its adaptability to New England agriculture.

Mr. WILLIAMS. Let me explain this In the first place the meetings were not to make decisions as to whether this practice ought to be in or that practice ought to be out.

Mr. MCINTIRE. I appreciate that.

Mr. WILLIAMS. We carefully avoided that because we do not want decisions made until the recommendations are in from the counties and States. The thought was expressed by—I do not know that it was a majority of the group, but several in the group—that the practices that were contained in the suggested guide might not in themselves be adequate for the New England area. We pointed out to them that we certainly wanted them to give consideration to the types of practices, especially the more enduring types of practices, that we needed for the area.

Mr. MCINTIRE. It disturbed me, frankly, in that this was an individual who has been with the ACP program ever since it started, and actively associated with its development. I say it disturbed me because he came away from the conference saying that the 1954 program has little to offer to New England. I have had other communications that have been equally disturbing from some of those who have been so actively in the program, and I wanted to know—and I think you have assured me—that if New England as an area—and I recognize the conflicts between counties as to specific practices—but if New England as a region proposed programs which were somewhat in conflict with the underlying principle involved here, if their proposition would be incorporated in the 1954 program at all.

Mr. WILLIAMS. As I indicated, Mr. McIntire, the final decision is with the Secretary, and his approval of it. Certainly any strong feeling with respect to what the program ought to be that represents some consensus, would necessarily get serious consideration. I cannot give

you any guaranty at the moment of what will be in or out. I think you understand that.

Mr. McINTIRE. Thank you.

The CHAIRMAN. Are there any further question? If not, we thank you very much, Mr. Williams, for your constructive testimony.

We had expected to have with us this morning Mr. George D. Riley, representing the national legislative committee of the American Federation of Labor. Mr. Riley was not able to attend the session this morning but he has submitted a statement which he would have presented if here. If there is no objection that statement will be made a part of the record at this point. It is a statement endorsing the watershed program which is being considered by this committee.

(The document above referred to is as follows:)

STATEMENT OF GEORGE D. RILEY, MEMBER, NATIONAL LEGISLATIVE COMMITTEE OF THE AMERICAN FEDERATION OF LABOR

My name is George D. Riley. I am a member of the national legislative committee of the American Federation of Labor.

The American Federation of Labor believes that our Federal Government has considerable responsibility for preservation of our natural resources and that water, soil, forest and range lands are so vital to our existence that conservation of them must not be left to chance.

We, therefore, agree with the statement of the chairman, Mr. Hope, at the opening of these hearings (on soil conservation and watershed programs) that farmlands, ranges, and forests combine to form our greatest natural resource.

It is our firm belief, too, that the conservation of these lands is absolutely essential to control erosion and floods and to secure dependable supplies of water, which is priceless to every community.

We recognize the need for large dams, such as the Reclamation Service and the Army engineers are building downstream to control floods. But the upstream phases of flood prevention are not getting the attention they deserve. So this committee is to be commended for attempting to get some action on flood-prevention measures on the upper watersheds.

Knowing that the heaviest rainfall and snowfall occur in the mountains, we hope that adequate provision will be made for land-treatment measures in the high country, including the public forests and range lands which are usually at the higher elevations. Wherever the Department of Agriculture administers federally owned lands, we believe that the Secretary of Agriculture should be free to institute flood prevention measures without waiting for an application from a local organization. These public forests and range lands are often rough mountain country, far removed from settlement. Also, those receiving the most benefit from protection of the national forest or other federally owned watersheds may reside hundreds of miles downstream and, in fact, may be in another State.

The American Federation of Labor endorses the principle of this bill, but at the same time wants to make sure that it applies not only to the farm lands but that adequate attention is given to the upper reaches of the watersheds from which most of the water comes. It should be remarked that 80 percent of rainfall is on the high mountain forest lands.

I desire to commend for the reading by the members of your committee an editorial which appeared in the Washington Post of May 5, 1953, titled "Holding water upstream". The text of the editorial follows:

"Many conservationists have long held that the Nation's flood and erosion problem could be considerably abated by more intensive efforts to hold water on the land. That is, more upstream conservation work, on individual farms and on small tributaries, would reduce the need for costly, large downstream dams—and hence reduce the need for reservoirs that permanently flood thousands of acres of farm land. This approach, unfortunately, has received little attention from the big dam advocates, although it has had some emphasis by the Department of Agriculture and Soil Conservation Service.

"Today a group of private citizens who have had firsthand experience with the problems of local watershed development are seeking to interest Congress in a better balanced program. Led by Raymond A. McConnell, Jr., editor of the Lincoln (Nebr.) Journal, they are testifying before the House Agricultural sub-

committee in behalf of a $5 million appropriation for 48 demonstration, or pilot, projects throughout the country to be undertaken by the Soil Conservation Service in cooperation with local groups. The Salt-Wahoo Watershed Association of eastern Nebraska, in which Mr. McConnell has been a moving spirit, furnishes an excellent example of local initiative.

"Few persons would be so dogmatic as to argue that upstream conservation can do away with all need for downstream dams. But the more that water can be retained near where it falls—by contour plowing and planting, by grassland farming, reforestation and small retention dams—the less will be the problem downstream. Inattention to this point has been one of the major shortcomings of the Pick-Sloan plan for the Missouri River. Incidentally, local opposition to the flooding that would have resulted from the proposed Tuttle Creek Dam in Kansas was a large factor in the congressional upset there last fall.

"Logically, upstream and downstream flood control ought to be equal parts of one integrated program. Local watershed developments have a great advantage in enlisting popular participation at the community level; the Federal role is primarily one of technical assistance. It ought to be apparent that if community watershed development can eliminate the need for just one big dam, it will save many times its cost."

The CHAIRMAN. The next witness is Mr. R. E. McArdle, Chief of the Forest Service. We will be glad to hear from you at this time, Mr. McArdle.

STATEMENT OF RICHARD E. McARDLE, CHIEF, FOREST SERVICE UNITED STATES DEPARTMENT OF AGRICULTURE.

Mr. MCARDLE. Mr. Chairman and gentlemen of the committee. I appreciate this opportunity to appear before the committee, and also your courtesy in permitting me to delay my testimony until near the close of the hearings due to my absence from the city last week. The attention the committee is directing toward resource conservation is most satisfying to me.

Most of the preceding testimony has been devoted to problems of soil conservation and watershed programs, following the theme of the opening statement by the committee chairman.

In considering these matters, it has become customary to distinguish between downstream flood control engineering structures of the Corps of Engineers and upstream flood prevention and watershed management activities of the Department of Agriculture. This is the division of responsibility expressed in the Flood Control Act of 1936.

But there is a further logical distinction within the upstream flood prevention responsibilities of the Department of Agriculture. It is an important distinction, and I would like to emphasize it. It might be called the upper-upstream to distinguish it from the lower-upstream.

The attention of the committee in these hearings has heretofore been directed primarily to the lower-upstream, which is comprised of cultivated farmlands and associated pasture and woodlands.

Without detracting in any way from the importance of flood-prevention activities on these lands, I should like this morning to discuss the very important role of the upper-upstream area, namely, the forests and open ranges of the mountains, foothills, and other noncultivated lands.

To have in your minds a balanced picture of the whole upstream flood-prevention responsibilities of the Department, it is essential to understand the vast extent of these forest and range lands and their tremendous significance in water management.

Consequently, I should like to review for you what this upper-upstream area is, where it is located, who owns it, its condition, and the flood-prevention work being done upon it.

Forests and ranges—the upper-upstream area: Forests occupy one-third of this country's total land area; open ranges another one-third. This is where most of the water falls. This is where most of the water enters the ground. From these areas originate most of our streams. Most of the silt in western rivers comes from open range lands. The vast size of these areas and the fact that they are at the headwaters of the streams where most of the precipitation occurs explain why they are so tremendously important in the total upstream watershed picture.

Forests are widespread throughout the Nation in almost all but the Plains States. In the East, are three-fourths of the country's commercial forest area but only one-third of the timber large enough to be manufactured into lumber.

The reverse is true of western forests, which with their old-growth stands, contain two-thirds of the total saw-timber volume on one-fourth of our total commercial forest land.

About 57 percent of the forest area is owned by farmers and other small woodland owners, 18 percent by industrial and other large holders, and 25 percent is in public ownership, mainly Federal and State. Most of the timber volume, as well as most of the forest land, is privately owned.

There is adequate forest land to grow all the timber we are likely to need in this country, and the national timber budget, considering all species and sizes is not far out of balance. But there is a decided unbalance in the larger trees of the more preferred species, which are in continuing demand for quality lumber, plywood, and large timbers. This is true despite the great strides that have been made in industrial forestry in the last 10 to 15 years, and the progress now being made in farm forestry.

Eventually we must either grow more of this quality material or use less. There is no solution in potential imports, and if we grow more, the bulk of it will have to come from privately owned forest lands.

The open range lands are mainly in the West, 60 percent in private ownership, and 40 percent in public ownership.

The remains of the original public domain comprise much of the western range today. It is primarily plain and semidesert land occurring between the forested mountains and the cultivated valleys.

In the West, although most of the water falls on the forested upper slopes of the mountains, most of the silt comes from the open range lands, mainly those in public ownership. A typical example is the upper Rio Grande watershed in Colorado and New Mexico.

There 80 percent of the water originates on the national forests, which comprise only 11 percent of the area. Yet the great bulk of the silt which is choking the river channel and filling Elephant Butte Reservoir comes from the open range lands. I want to illustrate that point with another example, the Colorado River.

As shown on this map, the darker the area, the more water that comes from the land. The darkest green represents the highest yield of water, and the next lighter shades represent lighter yields of water.

Now I will show you the location of the National forests in that area by superimposing this overlay. You can see that the national forests almost completely coincide with the areas where the heavy yields of water are.

In this particular drainage the national forests occupy only 18 percent of the total area, yet three-fourths of all of the water that goes down that river comes from those national forest lands.

Aggressive measures of range revegetation, improved range management, and willingness to graze no more livestock than the range will support are prerequisites to improved watershed conditions on the western range.

Although there are conspicuous exceptions, in general neither the timberlands nor the rangelands of this Nation are in good condition now. If they were, not only would there be an adequate supply of timber, and adequate forage for western livestock, but also the total problem of flood prevention and erosion control would be very greatly lessened. Good timber management and good range management are part and parcel of flood prevention and good watershed management.

The importance of forests in flood prevention and water yield has been recognized for many years. As long ago as 1876, the Congress directed the Commissioner of Agriculture—as he was called then—to investigate the influence of forests upon climate, in an act which was a predecessor to the establishment of the Division of Forestry in the Department of Agriculture in 1881.

The objective in establishing national forests, as stated in the Act of June 4, 1897, was "for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber."

The Weeks law of 1911 authorized the Secretary of Agriculture to recommend for purchase forested lands "within the watersheds of navigable streams as in his judgment may be necessary to the regulation of flow."

This is the organic act for the national forests of the East. The Weeks law also authorized the Secretary to cooperate with States "in the protection from fire of the forested watersheds of navigable streams."

The Clarke-McNary Act of 1924 reaffirmed this authority and extended it to "watersheds from which water is secured for domestic use or irrigation" whether forested or not. In the McSweeney-McNary Forest Research Act of 1928, the Secretary of Agriculture was directed to conduct investigations to determine the best methods "of maintaining favorable conditions of water flow and the prevention of erosion" on forested lands.

Thus it is apparent that prior to enactment of the Soil Conservation and Domestic Allotment Act in 1936, the Department of Agriculture, through its administration of the national forests, through cooperative activities with States and private owners, and through forest research was deeply engaged in flood prevention and watershed management on the "upper-upstream."

Exclusive of Alaska and Puerto Rico, there are 150 national forests embracing 160 million acres. One of the two principal purposes in having these national forests is, according to law, to secure favorable conditions of water flow.

Of all the multiple values of the national forests, including timber, forage, minerals, recreation resources and wildlife, the foremost unquestionably is water. About 90 percent of the hydroelectric power in the West is generated from water arising on the national forests; two-thirds of the irrigation water of the West comes from the national forests; some 1,800 cities, towns, and communities of the West are dependent on the national forests for their domestic and industrial water supply. A great many more are partially dependent.

On occasion, destructive floods originate on national forest lands which have not been fully rehabilitated. Sometimes trouble may originate in one State, but with most of the damage occuring downstream in another State.

Even before the national forests were established the Department was in a small way advising private forest owners on methods for better land management.

Today this is a major activity of the Forest Service but is now carried on through cooperation with State forestry and conservation departments. Through such cooperation the area under organized protection from forest fires has been increased to 369 million acres; the number of trees planted on denuded areas by private land owners has risen to more than 400 million trees annually; and each year about 3 million acres of small forest properties are converted from poor to good management.

All of these activities aim at maintaining a complete cover of vegetation for the soil and therefore are of fundamental importance in upstream soil and water conservation. This pattern of Federal participation through State agencies is well established and any proposal for activities involving maintenance of forest cover should provide for full participation by State agencies.

The Forest Service in 1910 initiated research on the effects of forest cover on run-off and erosion, when the famous Wagon Wheel Gap Experiment Station was established on the Rio Grande National Forest in Colorado. This work was conducted cooperatively for 16 years by the Weather Bureau and the Forest Service.

During the past 25 years since enactment of the McSweeney-McNary Forest Research Act the Forest Service has gradually developed 11 regional forest and range experiment stations. A research program in forest and range watershed management is being actively pushed with principal outdoor laboratories for this research located in North Carolina, Colorado, Utah, Arizona, and California.

Some members of this committee, a few days ago, were shown a Forest Service motion picture called "Waters of Coweeta" which summarized some of the results at one of these areas. Should other members of the committee wish to see this motion picture, I would be happy to arrange for it to be shown.

Problems under consideration at these research centers include how to store more snow and water in high mountain forests and release it slowly to valley cities and farms, how to stop highly destructive mud and rock flows, how to increase late summer streamflow for irrigating crops, how to regulate floods and erosion in the steep brush-covered mountains of southern California and how to conserve winter rains in the semi-desert Southwest to help relieve chronic water shortages.

Our research, therefore, is directed not only toward what might be called the negative objective of preventing floods, but also toward the positive goal of increasing the quality, the regularity and usability of water flow at the time of year when most needed.

Although I understand this hearing is not directed to consideration of specific legislation, Mr. Hope's opening statement referred to bills by himself and Mr. Poage. When the committee does consider H. R. 4877 and H. R. 559, it may wish to consider broadening the authority of the bills to enable the Department in certain instances to take the initiative in flood-prevention surveys and works of improvement on public lands.

Mr. POLK. I do not like to break in on your statement but would you care to suggest to the committee the language that you think should be included in H. R. 4877 to secure the desired results that you mentioned here?

I think it is very important.

Mr. MCARDLE. I do not have such language, Mr. Polk. But I will have it prepared and will be glad to provide it for the committee's consideration.

The CHAIRMAN. If there is no objection, we will have Mr. McArdle prepare the language that he has in mind and it may be submitted as a part of the record at the conclusion of his statement.

(Data referred to above appears at p. 216.)

Mr. MCARDLE. I will do that, Mr. Chairman. The reason for my suggestion is that there are watersheds where Federal land predominates, sometimes even comprises all or almost all of the watershed. That is true in many of the national forests.

The committee, therefore, may wish to consider giving the Department authority under these bills to initiate and prepare a plan for works of improvement. Such a plan to be complete would necessarily cover both the Federal land and the intermingled or adjacent non-Federal land, if any, within the watershed.

If it appears after preparation of such a plan that its objectives can be substantially accomplished by performance of those aspects of the plan applicable to Federal lands, the committee may wish to give the Department authority to carry out the planned works of improvement on the Federal land.

The installation of the remainder of the plan applicable to non-Federal land presumably would require the agreement of the local interested organizations. Such authority as just described is important to enable the Federal Government to discharge its responsibilities of stewardship on national forests and other Federal conservation lands.

To recognize Federal responsibility for Federal lands would round out the pattern of these bills with their objective of relying to the fullest practical extent on local initiative and cooperation of local interested organizations.

MAJOR FOREST SERVICE PROBLEMS

Since these are general conservation hearings, I feel very definitely that I would not be meeting my responsibility in this, my first appearance before the committee as Chief of the Forest Service, if I

did not briefly lay before you a few of the major conservation problems confronting the Forest Service which, in my judgment, cannot be fully solved without Congressional consideration.

Last summer a subcommittee of this committee inspected parts of the national-forest system from Seattle, Wash. to Flagstaff, Ariz. I am told that the subcommittee became intensely interested in certain problems associated with utilization of the mineral resources on the national forests, with sanitation problems in connection with recreational use, and with the construction of roads to gain access to timber in need of harvesting. These are among the matters I wish to mention.

(1) Mineral resources: The problem of effective utilization of mineral resources on the national forests without undue impairment of surface values has become increasingly acute in recent years. The fact is that the mining laws are being misused to acquire title to valuable timber, summer homesites, or other surface resources.

The National Forest Advisory Council has recently completed and submitted to the Secretary of Agriculture a comprehensive report on this problem, copies of which have been made available to some members of the committee.

Public attention was recently called to the problem by an article in Collier's magazine, which gave a reasonably correct impression.

The question is not mainly one of faulty administration of the mining laws due to insufficient funds or other reasons. The trouble arises from loopholes in the present laws, which were enacted in 1872 during the pioneering era. Five bills in the present Congress bear on this problem.

They are S. 783, by Senator Anderson (which is related to H. R. 8341, of the last Congress, by Mr. Cooley); companion bills S. 399, by Senator Chavez, and H. R. 344, by Mr. Regan; and two other companion bills, S. 1830, by Senator Dworshak, and H. R. 4983, by Mr. D'Ewart.

Lest I be misunderstood, I want to emphasize that the Forest Service is in no way opposed to legitimate prospecting and effective utilization and development of the mineral resources of the national forests. On the contrary, legitimate mineral development should be encouraged, but without undue impairment of surface resources.

(2) Sanitation and care of public campgrounds. The problems associated with effectively providing for the 30 million annual recreation visits and the 6 million hunters and fishermen who use the national forests each year are substantial.

The committee has had before it bills during the last several Congresses bearing on the administration of the recreation and wildlife resources of the national forests. Hearings were held in the 82d Congress on H. R. 565, by Congressman Tackett, and in this Congress on H. R. 1972, by Congressman Baker.

Although no representatives of the Forest Service or the Department have testified before the committee at either of these hearings, the position of the Department was made clear in its formal report on the bills. I would simply express the hope that the Congress come to grips with this problem in whatever way it deems appropriate. The situation is so urgent that public health is being endangered in some areas. Closure of certain of our most heavily used public campground

has been recommended during periods of peak use by the United States Public Health Service and by local and State health services.

(3) Access roads: The national forests of the West contain large volumes of overripe timber urgently in need of harvesting before it succumbs to insects, disease, or windthrow. Much of this timber cannot be logged now because there are no roads to it.

A substantial program of constructing timber access roads is needed more and more each year as the timber becomes more overmature and as other sources of high-quality timber are used up.

Also, this land needs to be put into productive condition and started toward the growing of new timber crops. If the needed access roads were built, the annual cut of National-forest timber could be stepped up on a sustained-yield basis from the present 4.4 billion board-feet to 6.6 billion board-feet. The problem is not new. It is before the Congress each year, and has recently been brought before this committee by the introduction of H. R. 4929, by Mr. Ellsworth.

(4) Grazing legislation: There are several bills in the Congress dealing with the administration of grazing on the national forests, and in some instances also on the Federal grazing districts and on the Bankhead-Jones title III lands.

There are bills by Mr. D'Ewart and by Senator Butler, for himself and Senator Barrett, referred to the Committees on Interior and Insular Affairs. Related bills, by Mr. Hope and Senator Aiken, are referred to the Committees on Agriculture. Hearings on Mr. D'Ewart's bill are scheduled for May 20–22.

The bills deal primarily with questions of stability of tenure for present grazing permittees, transfer of grazing privileges, and appeal procedures. The Department's position on these bills is now being formulated. The issues are complex, highly controversial, and have stimulated widespread public interest.

In summary, I hope the committee will bear in mind the vast importance of the forest and rangelands, these lands which cover two-thirds of our country and comprise what I have called the upper-upstream. National forests are at the headwaters of nearly all major river systems. In the West most of the water originates on national forests which are the high mountain areas of heavy precipitation. Most of the silt comes from the open rangelands, much of which is in public ownership.

Forest Service responsibilities include administration of the national forests, cooperative fire prevention and technical assistance with States and private owners, and research. Flood prevention and watershed management are one of the two main objectives of the national forests; were one of the basic reasons for initiating forestry cooperation with the States nearly 50 years ago, and have been a major research activity of the Forest Service since 1910.

I would urge the committee in its present attention to flood-prevention problems on the "lower-upstream" to recognize also the tremendous importance of the forests and ranges where activities of the Department in this field have been under way for many years.

May I say again I appreciate this opportunity to appear before the committee. I have been told the committee may take a western trip during the congressional recess. Should this be true, and it proves at all possible to devote any time to consideration of forestry

matters, the Forest Service would consider it a privilege to show Forest Service activities to the committee or any of its members.

If a western trip should not materialize, perhaps the committee would be interested in our flood-prevention and watershed-management research activities underway at the Coweeta Experimental Forest in western North Carolina. A trip to this area could be arranged with only a short absence from Washington.

SUGGESTED LANGUAGE REQUESTED BY MR. HOPE FOR INCLUSION AS A NEW SECTION IN H. R. 4877

SEC. —. In the event the land in any watershed or subwatershed is wholly or predominantly in Federal ownership, the Secretary is authorized to prepare a plan for works of improvement in such watershed or subwatershed, and after having determined that the flood-prevention and soil-conservation benefits exceed their costs, to install such works of improvement on the land in Federal ownership if he finds that such installation will substantially accomplish the purposes of the plan; and whenever the plan is agreed upon by the Secretary and the interested local organization, and the local organization meets the requirements for participation in carrying out the works of improvement as set forth in section 4, the Secretary is authorized to install such works of improvement on the land in non-Federal ownership: *Provided*, That no such plan shall include works of reclamation or irrigation except such as are incidental to the major purpose of flood prevention and in no case shall the Secretary approve a plan involving installation in connection with a single structure of more than one thousand acres of irrigation: *Provided further*, That before the installation of such works of improvement is commenced, the Secretary shall transmit a copy of the plan and the justification therefor to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture and Forestry of the Senate for consideration. Unless either committee, by committee resolution, disapproves the plan within sixty days, while Congress is in session, from the receipt thereof, the Secretary may proceed with the installation of such works of improvement: *Provided further*, That such installation may be commenced at an earlier date if both of the committees notify the Secretary that they have no objections to the plan.

The CHAIRMAN. Thank you very much, Mr. McArdle, for your appearance before this committee. We are happy to have you here, and I am sure the committee will give careful consideration to the recommendations that you have made.

Also, I might say that the committee, every member of it, is interested in our national forests.

We realize that we have a great deal to learn about the problems, the growing problems in these forests, and it is the hope of the chairman and, I am sure, of many members of the committee that we will be able to make some on-the-spot studies and investigations during this Congress, perhaps during this session or in between sessions.

We hope to be able to work out some plans along that line. Are there any questions?

Mr. GOLDEN. I think the gentleman ought to be very sincerely congratulated in pointing out many of the programs that are so vital to this Nation of ours, and I feel that all members of the committee will be glad to cooperate with his Department in developing these things that mean so much to all of our people.

The CHAIRMAN. I think we all join with you in that statement.

If there are no further questions, we thank you very much, Mr. McArdle.

The committee will adjourn until 10 o'clock tomorrow morning.

(Whereupon, at 11:43 a. m., the committee adjourned, to reconvene at 10 a. m., Friday, May 8, 1953.)

SOIL CONSERVATION AND WATERSHED PROGRAMS

FRIDAY, MAY 8, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10:05 a. m., in room 1310 House Office Building, Representative Andresen presiding.

Present: Representatives Andresen, Hill, Lovre, McIntire, Golden, Wampler, Albert, Polk, Wheeler, and Thompson.

Mr. ANDRESEN. The committee will come to order and we will resume consideration of the conservation hearings.

We have the pleasure of having with us this morning one of our distinguished colleagues in Congress, Representative Henry O. Talle, who is one of the outstanding Representatives in Congress.

We are very glad to have you here, Mr. Talle, and we will be pleased to hear your statement.

Mr. TALLE. Thank you for your generous remarks, Mr. Chairman, and I assure you it is a pleasure always to come before this distinguished committee.

STATEMENT OF HON. HENRY O. TALLE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF IOWA

Mr. TALLE. Mr. Chairman, my desire to appear before this committee in support of the bill recently introduced by its distingusihed chairman is motivated by several considerations.

Uppermost in my mind is the vivid recollection of the disastrous floods that occurred in the Midwest in 1951. Many people throughout the Nation read only of the terrible damage in Kansas City and Topeka. Radio and television reports were principally concerned with how much property was damaged or lost in these two cities and others on the banks of the Kansas River. Overlooked by many, who were concerned about this disastrous flood, were other damages of frightening magnitude—frightening because tons of our fine topsoil from cultivated upstream farms were washed away and deposited in places where it could never be used again or where it was not wanted.

Crops were destroyed and the agricultural capacity of the area, including sections of my own State of Iowa, was alarmingly diminished. Irreplaceable soil was lost, which in itself is a sobering disaster, but add to this the approximately one-half billion dollars these losses represent and the picture is really dark.

In considering, therefore, the flood damages to our large cities, we cannot afford to overlook what happens in the lands upstream where the floods originate.

Another consideration responsible for my interest in the legislation proposed by your chairman is the need for action in controlling water before it builds up into a frightening, disastrous avalanche of uncontrolled power. Perhaps a few decades ago, we as a nation, could find some justification for the wanton destruction of our natural resources. We cannot justify such carelessness any longer.

The prosperity of our own people and our position of prominence in world affairs demand that we delude ourselves no longer. We now know that our natural resources—whether soil, or water, or wildlife, or range, or forests—are not inexhaustible. We did not create them. But we can husband these resources with care and use them wisely with intelligent consideration for the future.

For many years now, we have been planning to do something about controlling the floods that have taken so large a toll of our natural resources. Mr. Chairman, I compliment you on your bill, and I compliment this committee on the interest you are demonstrating in getting something started on flood control of the upstream areas of our rivers.

In my support of this proposed legislation, I would suggest that provision for flood control on the wildland areas in the upstreams be strengthened. Wildland areas do contribute to floods, particularly if they have been misused. I know that you are familiar with the importance of such areas, but my interest in this bill prompts my suggestion.

For many years I have been keenly interested in the administration and management of our great national forests throughout the Nation. I know what good forest areas will do in absorbing rainfall, in storing water, and in contributing a steady, uniform flow of clear, pure water to our streams and rivers.

I urge that some provision be made in H. R. 4877 to authorize the Secretary of Agriculture to initiate flood-control measures on the public lands under his administration. Wise provision is made in the proposed bill for teamwork between local organizations and the Secretary in planning and carrying out works of improvement on private lands.

Many of the national forest areas and other public lands, however, are in isolated areas where there are few, if any, community organizations. It is for this reason that I hope your committee will provide full authority for the Secretary of Agriculture to initiate the necessary flood control work on the public lands under his jurisdiction.

Again I extend my compliments to this committee and to you, Mr. Chairman, for your efforts toward getting something started on upstream flood control. Your cordial reception and consideration in granting me time to testify is appreciated.

Mr. ANDRESEN. We thank you, Mr. Talle, for your very excellent statement.

Are there any questions? Mr. McIntire.

Mr. MCINTIRE. No; I have no questions.

Mr. ANDRESEN. How many soil-conservation districts do you have in your congressional district?

Mr. TALLE. Each county in my district is organized as a soil-conservation district. The entire State is so organized. There are 99 counties in Iowa and we have 100 soil-conservation districts because one county is divided into two such districts.

Mr. ANDRESEN. Well, the contour of your district along the Mississippi is similar to what I have in the First District of Minnesota.

Mr. TALLE. That is correct.

Mr. ANDRESEN. And your problems are the same.

Mr. TALLE. That is right.

Mr. ANDRESEN. You referred to the disastrous floods that took place in 1951 and 1952.

Mr. TALLE. Yes, indeed.

Mr. ANDRESEN. What particular cities and villages, as you recollect it, were damaged by flood?

Mr. TALLE. Thank you for asking me that question, Mr. Chairman. It gives me an added opportunity to emphasize what I have pointed out to the subcommittee on Civil Functions of the Appropriations Committee.

The 1951 disaster in Clinton, Iowa, was the most dramatic. There was a special reason for it because when the 9-foot channel was established it left the sewer outlets in that city more than 2½ feet below the water level. When the floods came, the sewage backed up, and the entire city was resting on what might be called a cesspool of sewage.

And that beautiful city found the basements of its homes filled with sewage. It was in the streets everywhere. Rats and fish and snakes—this is not a nice thing to talk about—came up through the plumbing in the bathrooms.

All of the 30,000 people had to be inoculated; and thank the Lord, nobody did get typhoid fever.

Passing now to Dubuque, more than 15,000 families had to be evacuated there. And the Red Cross did a fine job of helping.

I have mentioned the two largest of the cities that were stricken. But cities all the way from your district, Mr. Andresen, the first one being New Albin, Iowa, and all the way to the end of my district, embracing five counties on the Mississippi River, all of them were stricken badly. Millions of dollars of damage was done.

The disaster in 1951 was duplicated in 1952. This year, fortunately, the ice went out slowly, and the disaster did not come. But there were two very, very disastrous years. Remedial works are now in process of construction at Clinton but the appropriation is inadequate to complete the job. And I am spending a good deal of time trying to convince the proper authorities of the Congress that the Congress does have a responsibility for damages that are caused by a stream over which the Federal Government has control.

Mr. ANDRESEN. You had no difficulties this spring?

Mr. TALLE. Not this spring, no, sir.

Mr. ANDRESEN. Well, we thank you very much, Mr. Talle, for your statement.

Mr. TALLE. Thank you for the opportunity to appear.

Mr. ANDRESEN. We will hear next from Congressman Howard S. Miller, of Kansas, who will make a statement to the committee.

Mr. Miller, we would be pleased to have your statement.

Mr. MILLER. Mr. Chairman, the statements have been distributed, and I wish to state to the committee that I am thankful for the opportunity to meet before you on a subject that has been very near to my heart for a considerable length of time.

STATEMENT OF HON. HOWARD S. MILLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF KANSAS

Mr. MILLER. Honorable members of the committee, it is perhaps desirable that I first identify myself. I am a farmer from Brown County, Kans. Brown County is situated in the northeast corner of the State on the border of Nebraska. It is in the area of abundant rainfall, has a temperate climate, and had, when my parents brought me there 71 years ago this spring, a rich, deep soil. Except for a few years in college, 2 years teaching a country school, and the past 4 months here in Washington, I have resided upon, worked upon, and operated farms all my life.

For many years I operated from 640 to 720 acres of land and most of this was planted to corn or some to small grain. The past year, 1952, I owned and operated 848 acres of land of which more than 600 were in cultivation.

I mention these personal matters, members of the committee, that you may know that I have had ample opportunity to witness what has been happening to the topsoil of the Middle West, which has been called the breadbasket of the Nation.

I have brought with me, for your inspection, some soil samples I have procured from my own farm, and a profile of soil procured from a farm in Richardson County, Nebr., just 18 miles north of my own land. These samples exemplify more forcibly than I could possibly put into words what excessive rainfall, without conservation practices, is doing to our land.

There is not a more important question before the American people than that of saving the fertile topsoil which is the source of their living. It is impossible to know the importance of this question without first realizing that the fertile, lifegiving soil has been long ages in forming, that it is very limited in quantity, that it was held upon the land surface only by the protection of growing vegetation, and that vegetation is still its chief and only real protection.

Through the centuries, before man became an agriculturist, there was no danger of a wastage of the soil. It was held fastbound by the vegetation cover. Not until man discovered that he could increase his food supply by stirring the ground with a sharpened stick and planting seeds of fruit and grain, plucked wild from grass and bush and tree, did any net wastage of the soil begin. Up to that time there was from year to year and age to age a net increase upon the earth of fertile, humus-laden soil.

Not even after man began to stir the soil, to kill grass or weeds and make a suitable bed for his seed, was there danger of serious loss. With nothing but man or animal power, and nothing but wooden implements, it was impossible for man, even great numbers of men, to disturb the surface of the earth so as to make possible that the two great erosion agents of nature, wind and rain, should be able to seriously diminish the sum total of life-producing soil.

This inability of man, through want of mechanical power and proper implements, to produce food and fiber cheaply and abundantly, made it necessary that the great majority of people should be engaged in agriculture. The population of nations was limited and circumscribed by the number of people who lived upon the land plus the small number that could survive upon the surplus they created. The

people who produced the food and clothing had to be fed and clothed first, or there could be no food and fiber, just as the horse that pulled the plow had to be fed alongside of his master, before there could be any plowing done.

The lack of ability to till the soil limited the ravages of wind and rain upon the surface of the earth, limiting man's ability to disturb and endanger it. One hundred and fifty years ago the population of what is now the United States was confined to 4 or 5 million people living on a narrow belt fronting the Atlantic Ocean. At that time, it was believed that the great expanse of fertile soil and the immense forests lying between the Appalachian and the Rocky Mountains constituted a reserve of potential food and fabric for centuries to come. At present the United States is a Nation of 165 million people and increasing at the rate of 1,500,000 per year. What has happened that has brought about this unprecedented, this undreamed of, increase in human population?

Mainly two things contributed to this situation. First the discovery of cheap processes of producing steel resulting in the invention of the steel moldboard plow which made possible rapid turning over of the soil and consequently the rapid settlement of the West.

I might interpolate here that this happened almost within our own lifetime. My own grandfather in Pennsylvania—one of his skills was the making of the wooden mouldboard, just over here a few miles from Somerset County.

This movement was greatly accelerated by the invention of the internal combustion engine which doubled and tripled the speed at which settlement was made. This increase in mechanical power made it possible for 1 man to produce what required a number of men 150 years ago.

It made it possible to feed, shelter, and clothe vast numbers of people not engaged in the occupation of producing food and fiber. It made possible our great cities. At the time of the adoption of the Constitution, 90 percent of the people were farmers. Among them were Thomas Jefferson and George Washington.

Now, less than 20 percent of the people are engaged in agriculture. This fact makes it all the more necessary that we do not endanger the source of our food supply. How well have we fulfilled that obligation?

Let us look at the record. I fear it is a sad picture. The same inventions and implements that made possible the great increase of food production, the same turning of the sod to plant the seed, exposed the soil to ravages of wind and rain. Through the years, every ravine, every creek, has been a channel through which our good topsoil has been rapidly carried toward the sea. Year after year this depletion has continued. The farmer has seen the destruction but has been unable to halt the devastation. Experts in our land-grant colleges and in the Department of Agriculture have lectured and written articles calling attention to the dangerous waste, but in vain.

But, you say, "Why all this anxiety? Have we not left millions of square miles of fertile soil? Do we not have land to spare? Why worry? At any rate, let future generations take care of themselves."

I will answer that last assertion first. Future generations can take care of themselves only as we, this and succeeding generations, leave to them the wherewithal to do so. Mankind has not yet found, we

believe that mankind may never find, a means of livelihood except from the products of the soil. Man cannot create soil. It should therefore be his greatest care to preserve it. The fertile topsoil is the product of nature's laboratories through countless centuries. The slow chemical action of heat and cold, air and moisture, upon the earth, the erosion of wind and rain, the churning of the waves upon the seashore, the emergence of plant and animal life, all combined through eons of time to produce some 8 or 10 inches of precious soil upon about one-eighth of the earth s surface.

An amount so small that it could all be washed into the sea and not make for that hungry maw one good breakfast. Do we realize that the Gulf of Mexico could hold all the fertile soil upon the surface of the United States and still be the Gulf of Mexico? But really how great is the danger of losing our fertile soil? How serious is the menace? The facts are startling.

Over a great expanse of the Middle West, which is the breadbasket of the Nation, already we have lost to water erosion from one-third to one-half of our topsoil. Only the fact that there had been such an abundant accumulation through the milleniums before the white men arrived to break the sod, prevents the present loss from being disastrous.

But the loss must not continue for it is rapidly becoming serious. Already it is being seriously felt. Already we farmers are spending hundreds of millions of dollars annually for commercial fertilizer to produce crops that would be equally large without fertilizer, had we but saved our soil.

I might mention here parenthetically that that is very graphically demonstrated in my own immediate area through the fact that one quarter section of land that was never broken until the last 7 years is producing 50 percent more than the average farms, comparable farms in that neighborhood, simply because that soil was never disturbed.

And I have been told this too: That a few years ago, there was occasion to have this land inspected for a loan; and that the agent of the life insurance company that went upon this land to determine the depth of the soil, said that was the deepest soil—that that farm had the deepest soil of any farm in all that neighborhood, simply because it had never been eroded. And I know him; he is a neighbor of mine. And where I produce 50 bushels of corn, he produces 70 to 75 bushels; and it is not because he is a better farmer than I am.

And that short sentence brings me to the gist of the question: Why didn't we save our soil? I answer that question in two words: "We couldn't."

Until the last 30 years, we had no practical way to till the sod, and yet save the soil. That is a plain blunt statement, but it is true.

The discoveries and inventions that made possible the cutting of the forests and breaking of the sod and consequent washing away of the soil did not make it possible to adopt measures to save it. The horse and the mule, the plow and the slip were not suitable power and implements with which to construct terraces, waterways, and detention dams. Their use required too much time. It was too expensive. It was physically impossible.

I know, for I tried it. Besides, there were other good and sufficient reasons. During most of the last century and a quarter, when most of our soil loss was sustained, times on the farms were hard.

Prices generally were low and on a bare subsistence basis. Usually the farmer was either a renter or in debt for his land. He had interest and taxes to meet. They were fixed charges, regardless of the size of his crop or the price of his products. He worked early and late. Conditions compelled him to save. He only half realized the serious loss of his soil. Besides, if the public did not worry, why should he? If his soil became too thin, he would go west. This was an attitude all too common and all too well justified. It was an unhealthful situation. A costly situation to the farmer, to the Nation, and, worst of all, to posterity. Many farmers realized the seriousness of the situation and by rotation of crops, shorter corn rows and contour farming, did what they could to correct the evil.

But it was an uphill struggle and in the end a losing fight. Many agricultural experts in the land-grant colleges and the Department of Agriculture realized the situation and lectured and wrote newspaper and magazine articles depicting the continuing and serious loss. Theirs were as voices in the wilderness, for even though the people heard and believed, there seemed to be no effective remedy.

Along with the loss of soil by erosion there developed another serious evil. The breaking up of the lush grasslands greatly accelerated the speed of the runoff water to the drainage channels, the creeks and finally to the rivers. It not only ran off with greater speed but consequently carried with it greater amounts of mineral acids, soil particles, clay and sand.

This caused greater and more frequent overflows of ravines, creeks, and rivers; cutting deeper the ditches and depositing the silt along the creek banks, thereby clogging the channels, or upon the overflowed lowlands skirting the streams, thereby covering growing crops and sometimes making useless the land for years to come.

Valuable bridges and costly buildings and fences were frequently swept away. It was found that the plowed fields and overgrazed pastureland contributed greatly to flood losses.

This was the condition of the great Midwest agricultural region up to less than 25 years ago. To anyone at all conversant with the condition and having regard for the future welfare of the country it was disheartening. But just at the same time when the clouds of despair were darkest, just when there seemed to be no way in which we could till our land and save our soil, there was developed machinery which made it possible to use the well-known methods of terracing, contour farming, grassed waterways, flood detention dams so quickly and so cheaply that it is now apparent to any thinking person that, by proper cooperation of the individual farmer, the State and National Governments' serious loss of soil can be absolutely prevented.

In 1936 the Congress passed the first Soil Conservation Act, calling upon the various States to pass enabling legislation authorizing the formation of voluntary soil-conservation districts to be under the immediate direction of a board of supervisors elected by the farm owners and operators.

In furtherance of this program the Federal Government furnished, free of cost to the districts, expert engineering service to survey and lay out the work authorized by the board of directors and agreed to by the landowner. This act was the beginning of the first effective soil-conservation program in the United States. Kansas was one

of the first States to pass enabling legislation authorized by the act. This was in 1938. At the present time, 102 of the 105 counties in the States have been organized into soil-conservation districts.

I mention Kansas to this committee because I come from that State, and I know more about the conditions there.

In addition to furnishing technical assistance, the Federal Government has provided funds to cover partial expense of certain soil-conservation practices such as terracing, construction of waterways, and detention dams.

The Federal assistance has greatly encouraged farmers to comply with the requirements of the soil-conservation authorities and has greatly expedited the work which seems, in most cases, to be limited to the amount to which assistance has been granted. There are crosscurrents of thought as to the justice and advisability of the Federal Government furnishing assistance in work done on property belonging solely to a private individual.

Looking at the matter from the standpoint of the Government being the guardian of the welfare of all of the people, not only of the present time but for future ages, any action taken to protect the interest of posterity can be justified as fully as that of making war, building bridges, or any other act by which the Government exercises the right of seizure for public good or of eminent domain for any cause.

Any expense, therefore, that the Government may incur in a program to save the soil can be justified, so long as it redounds to the good of all and not especially to the enrichment of the individual. On this basis the writer can think of no circumstance in which the Federal Government would be more justified in making expenditures calculated to revert to the benefit of all the people than that of expediting, with all possible speed, the program of soil and water conservation and the accompanying benefit of flood prevention.

I would like to emphasize that expression "with all possible speed" because we seem hardly to realize that the loss of soil is something that cannot be overcome. It is the one thing—we may have fires, or cities may be burned, or bridges may be washed away, or homes may be destroyed and they can be rebuilt; but this good soil that made possible all of these things can never be brought back.

We are all hoping that the time will not be too far distant when the present world tension will cease and the defense program will be deemed unnecessary. When that time comes, thousands of soldiers and defense plant workers will be seeking civil employment.

Is it too much to hope that those young men and many of those giant machines now used in our program of defense, can be put to work in the important undertaking of soil conservation?

Man now has it in his power verily to transform the face of the earth, to make of excess rainfall, formerly an enemy, a most beneficent friend—"To make two blades of grass grow where one grew before."

We have the machinery. We have the know-how. It is only a question of how best to use them.

Members of the committee, it seems there can be no doubt as to the absolute necessity that immediate steps be taken to conserve our soil. It is also plain that if this is to be accomplished there must be governmental assistance. Since it is of national concern, it becomes the duty of the National Government to render the assistance.

Without consuming the valuable time of this committee, I will sum up my position in this regard by stating that I have carefully studied H. R. 4877 and fully approved of its provisions. I will state further that I favor H. R. 3376 which provides that, with exceptions therein pointed out, expenses incurred in soil conservation practices done under direction of the County Soil Conservation District Board, shall be deductible from farm income for income-tax purposes.

Mr. ANDRESEN. Thank you for your statement.

I should like to ask one or two questions.

What is the extent of the cooperation on the part of the farmers in your area or in the State to putting these soil conservation practices into operation on their individual farms?

Mr. MILLER. I will state, Mr. Chairman, that the cooperation is, I think, very exceptionally good. The signup in my county asking the cooperation, the help of the technicians, and the cooperation of the supervisors is almost 100 percent, providing they can get some governmental assistance.

As I mentioned in my statement, a good many of these farmers are interested, and a good many of the landowners are owing for their land as young men starting out do, and they borrow money; and they just feel that they do not have the money to spare.

I am sorry to say that it seems to be a fact that the cooperation, the actual doing of the job, depends too much upon what assistance they can get.

Mr. ANDRESEN. Well, there must be cooperation on the part of the farmer to do the work if it is to be done. Do you agree to that?

Mr. MILLER. Oh, yes, I do. I tell you, Mr. Chairman, I have been giving this a lot of thought; and it seems to me that the attitude of the farmer is changing as he has been educated to this; and that if they have the money that they can spare, or if they could borrow it at a low rate of interest and for a long time, that there would be great cooperation, and the work would be done sooner.

Mr. ANDRESEN. Well, we have had 10, 12 years of excellent crops, including more than 300 million bushels of wheat in Kansas last year, and a good corn crop. And the price has been substantially good under the price support program.

So, there cannot be too much of a shortage of money.

Mr. MILLER. That is true, Mr. Chairman; and I might state that there has been a very great deal of work done; but there is a great deal more that is still to be done.

Mr. ANDRESEN. Taking your own case, I notice here that you own 848 acres, and I believe you stated you had 600 acres under cultivation last year.

Mr. MILLER. That is right.

Mr. ANDRESEN. What was that planted to?

Mr. MILLER. That was planted to wheat and corn and oats, alfalfa, grown grass—160, 170 acres—and some bluegrass.

Mr. ANDRESEN. What soil-conservation practices do you have on your own place?

Mr. MILLER. This farm is divided into two parts. There is a fractional section being on the correction line of 586 acres; and, except for 40 acres, 30 of which is in grown grass, and another rather rough part of the farm of about a hundred acres, that is all in grown grass; the rest is all terrace, Mr. Chairman.

Mr. ANDRESEN. And you have done that at your own expense?

Mr. MILLER. I have had a little Government assistance. But very little for the reason that I was out of compliance, so to speak, because I would not wait until my waterways were fully grassed in order to do the terracing. I was too anxious to save the soil on the field.

Mr. ANDRESEN. You apparently live in a section where there is rolling land?

Mr. MILLER. That is right. Yes. Our land is rolling in northeast Kansas.

Mr. ANDRESEN. Are there any questions?

Mr. Albert.

Mr. ALBERT. Mr. Miller, we have been, as you know, discussing the subject of conservation. What is the attitude in your district regarding agricultural flood control on a watershed basis through the Soil Conservation Service?

Mr. MILLER. You mean in my congressional district?

Mr. ALBERT. Well, in Kansas. Your part of Kansas.

Are your people interested in the development of watershed conservation?

Mr. MILLER. Very much.

Mr. ALBERT. Under the Soil Conservation Service.

Mr. MILLER. Very much so. Indeed we have a number of voluntary watershed organizations there. It happened that until a week or two ago when Mr. Lambertson was named in my place, I was chairman of one of those watershed associations.

Mr. ALBERT. May I ask you now: Have you ever been a supervisor of a soil-conservation district?

Mr. MILLER. No, I have not.

Mr. ALBERT. Have you been a county PMA committeeman?

Mr. MILLER. No; I have not.

Mr. ALBERT. What has been your experience with respect to the relative benefit on a dollar-invested basis as between the technical-assistance program of the Soil Conservation Service and the payment program under the agricultural-conservation program? That is, as a practical farmer?

Mr. MILLER. Well, if you are speaking from immediate benefit, of course, you are thinking of these PMA payments as against the payments for permanent watershed——

Mr. ALBERT. No. I am thinking about the benefits that you get out of PMA payments, whether for permanent or temporary practices as contrasted with the help farmers are getting through the Soil Conservation Service which furnishes engineers and technicians to assist in planning and carrying out plans on farms.

Mr. MILLER. Well, I would say, looking at it as a permanent benefit, the payments through the Soil Conservation Service are a great deal more beneficial.

Mr. ALBERT. You mean the assistance through soil conservation?

Mr. MILLER. Yes.

Mr. ALBERT. The ACP payment program heretofore, as I understand it, has been based on Government participation in the execution of certain practices approved at the State, Federal, and county levels. That is right, is it not?

Mr. MILLER. That is right.

Mr. ALBERT. There has been a lot said about the so-called temporary practices. What do you think of them as contributing to permanent soil conservation? That is, recurring practices, such as cover cropping, listing, and lime in some instances.

Do you think they contribute to permanent soil conservation?

Mr. MILLER. Mr. Albert, I would say it contributes, but not so much as it might; not so much as the same money would contribute, the same expenditure and effort, if it were put into permanent practice in the first place.

What I have in mind: in spreading of lime—I have done some of it—and rotation of crops, that is something that a farmer should do at his own expense.

Mr. ALBERT. Do you think he will do it at his own expense?

Mr. MILLER. Yes. Good farmers are bound to do it.

Mr. ALBERT. Of course, you are in one of the choice agricultural regions of the country, and you have fine agricultural setups, fine farms, and most of your farmers are pretty well off, are they not?

I have been through there, and it has that appearance.

Mr. MILLER. Yes, they are, or become so.

Mr. ALBERT. After they get established, they become farmers of substantial means.

And your experience there is that you think we should emphasize the permanent aspects of these programs and you believe the farmers can take care of their own recurring practices even though such practices contribute to permanent soil conservation.

Mr. MILLER. I am inclined to think so.

There is a certain amount of the money that the Government will be limited in spending, and I think it is better spent in permanent practices.

Mr. ALBERT. But you would not be in favor of changing the authority of local committees, representing local farmers, to have a big voice in the kind of practices they want in their own counties, or would you?

Mr. MILLER. Are you referring to the soil conservation districts——

Mr. ALBERT. I am referring to the ACP program.

Mr. MILLER. Oh, I see.

Mr. ALBERT. Heretofore, farmers have had quite a bit to say about which practices they were going to select. And the Department has not emphasized, as I understant it, too much the question whether they were permanent practices. In other words, if a certain county wants lime emphasized, payments for lime have been approved. If it wanted terraces or construction projects approved, they get them.

Now, would you be in favor of the Department of Agriculture saying that they are only going to limit practices to structural matters which contribute to long-range permanent conservation?

Mr. MILLER. I do not think, Mr. Albert, that I would go that far. That takes part of the democratic action out of it.

While these local committees may make some mistakes, that is part of our democracy.

Mr. ALBERT. Thank you.

Mr. ANDRESEN. Well, is not the farmer repaid every year for these recurring practices, like putting on lime, and getting his soil in order?

Mr. MILLER. That is right.

Mr. ANDRESEN. He gets the immediate benefit by increase in his crop; and so he benefits directly from that in that manner from those practices.

Mr. MILLER. That is right, Mr. Chairman; and I would find it just pretty hard to justify too much of that kind of assistance.

Mr. ANDRESEN. Up in our section where I live, we have the family-size farms. Now, yours may be a family-size farm; but I do not think we find many 800-acre farms up in my country. They have been mostly in the dairy business and diversified farming, where crops are rotated, and they plant a lot of pastureland, and hay, and we have been practicing soil conservation up there, oh, since the turn of the century.

It used to be one of the big wheat areas, but when it became cheaper to raise wheat in Kansas, we had to go into dairy businesses. But we had practiced soil conservation from the beginning. That is part of the program.

You may do the same thing on part of your land that you use for dairy purposes.

Mr. MILLER. Mr. Chairman, I used to be a dairyman; but when the children grew up so that I had to hire somebody to milk the cows, I sold the cows and went into the beef-producing business.

Mr. ANDRESEN. Well, I think you have made more money by making that change.

Are there any other questions?

Mr. POLK. Mr. Chairman.

Mr. ANDRESEN. Mr. Polk.

Mr. POLK. Congressman Miller, you have made a very fine statement; and I want to congratulate you on the presentation of this very important problem to our committee. I know that you have given a great deal of thought to the soil-conservation problem.

I am wondering what your comments might be on the problems of getting tenant farmers to participate in the permanent soil-conservation practices.

The reason I asked that question is that in one of the counties in Ohio that I have the honor to represent, approximately 50 percent of the farmers are tenant farmers. It is a fairly rich county. But the land is owned by absentee landlords in the cities, in many instances. And the tenants who farm these farms—and by the way, it is a level county, and the soil is fairly good—but the tenant farmers do not seem to want to participate in a permanent practice. He is more interested in so-called recurring practices.

Have you given any thought as to how we can create or how we can work out a program that would be attractive to the tenant farmer under these situations that you have outlined?

Mr. MILLER. I have given it some thought, Mr. Congresseman, because I participated in that. As I stated, I was, and still am, emeritus president of the watershed association in my district. That was formed with the avowed purpose of trying to make that area a very rich area comprising about a third of Brown County.

We wanted to make it the very first watershed in the United States to get completed—or to finish the program—complete program. We are still working on that.

And in trying to do that, it is necessary to get these tenants to participate. And we too have about 50 percent tenant farmers. The owners live generally in nearby cities and towns.

Three members of that 18-man board of this watershed association are tenant farmers. One of them is the son of ex-Congressman Labbertson, whom some of you no doubt know—a friend of mine, living only 6 miles away. And then two other men who are neighbors. And we do not have any better, more enthusiastic men on the board than these three tenant farmers.

In fact, Mr. Lambertson was recently elected president. And, by the way, my own son was elected vice president of the organization. I am very proud of that.

Mr. ANDRESEN. And you were elected to Congress.

Mr. MILLER. I have come to be proud of that too, Mr. Chairman.

Mr. POLK. May I say, Mr. Chairman, that we are very happy to have Mr. Miller with us here in the Congress. He is making a fine contribution to the deliberations of Congress and his wide experience as a farmer and agriculturist out in Kansas is giving us very valuable help. And I hope that his people in Kansas continue to send him back for many, many more years as long as he wants to come.

Mr. MILLER. Well, that is hoping a lot, Mr. Congressman. But I was wondering, Mr. Chairman—I don't know how much time I dare ask you to give me; but I have brought for your inspection some actual samples of soil from my own farm and from a nearby farm, and some pictures of soil-conservation practices taken in my own immediate area, showing what we are doing. And I don't know whether you would be interested or not.

Mr. ANDRESEN. I am sure the committee would be interested; but we have several more witnesses; and if you leave that here, we will look at them after we adjourn.

Mr. POLK. Mr. Chairman, may I suggest, if it is possible for Mr. Miller to briefly summarize what he wishes to point out with the soil samples, it might be interesting to us.

Mr. MILLER. I could do that within a very short time, Mr. Chairman; but I do not want to ask to monopolize your time.

Mr. ANDRESEN. Well, the only thing is that we have a schedule to maintain in hearing the witnesses.

Mr. MILLER. Well, if my time has expired——

Mr. ANDRESEN. If you wish to make just a brief explanation of what you have in mind.

Mr. MILLER. Thank you. I will do that.

Now, here are two boxes of soil taken from a wheatfield on my own farm. If you could see them closely, you would see that there is all good, black soil. That is what is taken from an area that had not been broken up. There is 8 inches of black soil there. And here is soil taken from a wheatfield just a few rods away. That was a few years ago exactly like this.

And the darkest of this soil is not as black as this, which goes to show at least these 8 inches; and, then, some more has gone down the river.

Then, here are two samples, members of the committee, of soil that I procured formerly by the soil conservation people of Lincoln, the area regional office there.

This sample of soil was taken from a cemetery that was never broken. You can see here we have black soil coming down to this line [indicating]. This was taken from a nearby field that was so badly eroded—no longer producing over 8 bushels of wheat per acre—

that it was abandoned for the time being as not being profitable to operate. It is plain to see that this soil would have come down at least to that line before the beginning of this [indicating].

In other words, that much soil has been washed off of that field. That is in Richardson County, Nebr.; it is rated the best county in that State.

Mr. POLK. Pardon me for interrupting, but would you infer from these 2 soil samples that possibly 16 or 18 inches of topsoil has washed away?

Mr. MILLER. In many of our fields.

Mr. ALBERT. It is not only that, but it is obvious that the lower part is darker and there has been a lot of depletion out of the soil as well as erosion.

Mr. MILLER. I do not need to tell you men, I am sure, but here I have a picture taken in my own county of what we are doing. This is a picture of the beginning of the operations, where the technicians have gone out and surveyed almost on the level; and we have here the farmer building his own terrace.

Then we have the field here after it was terraced and we had a heavy rain, and the picture was taken very shortly after the rain, showing the water that is being held in the terraces.

Undoubtedly if this field had not been terraced, you would not see any water there. But it would have gone the shortest, steepest route to the sea; and before the picture was taken would have disappeared. That shows the extra saturation that we get from rainfall.

And then here is another picture of the field when it has been planted to corn and has had the benefit of the rainfall. Even our friend from Ohio, I think that would look good even in Ohio. And I know what kind of land you have.

Mr. POLK. Yes, sir.

Mr. MILLER. I brought these along. I thought maybe there would be some men from the city here who would not know what I was talking about without seeing the picture.

Mr. ANDRESEN. We are all farmers here.

Mr. MILLER. I am willing to admit that if there had been a vacancy on this committee, and I could have gotten on it, that was my ambition.

Mr. ANDRESEN. The very distinguished chairman of this committee comes from your State, Mr. Miller.

Mr. MILLER. I know that. And by the way, I believe I mentioned that I am very much in favor of the Hope bill. In fact, I had a long conversation with the Congressman before he introduced this bill. I want to thank you gentlemen for the courtesy you have given me.

Mr. MCINTIRE. I have one short question for clarification in my own mind.

The chairman asked in reference to the participation in your area with the conservation program; and your answer was virtually a hundred percent. I just wanted to clear in my own mind as to whether one should draw from your answer that there is virtually 100 percent cooperation or participation by individual farmers with the SCS program or was your answer directed to virtually 100-percent participation with the ACP program.

Mr. MILLER. Well, I think I could answer both. The farmers are well sold on the SCS program.

Mr. McINTIRE. Yes, but there is a difference in being sold and actually having programed their farms under the technical guidance of SCS.

Is virtually 100 percent of the area that you referred to actually under programs mapped out by SCS?

Mr. MILLER. They have made their application. But they are slow in putting in the practice, if you know what I mean.

Mr. McINTIRE. Yes, I do.

Mr. MILLER. And as I stated, the fact that a good many of these farms are held by men who have recently purchased them and maybe owe for 40 or 50 percent, and they feel they cannot spare the money, but they would like to get it done.

Mr. McINTIRE. Is the interest of the farmers such that it is a lack of technical assistance in getting more done; or is it basically a lack of initiative—and I use that word kindly—as far as the farmer himself is concerned?

Mr. MILLER. I think, Congressman, that the fact that there is a shortage of funds, I believe, to pay on the part of the Government—

Mr. McINTIRE. Now, any payments, Mr. Miller, are entirely in the ACP program——

Mr. MILLER. Yes, I see what you mean. However, that reflects on the soil-conservation practices, does it not?

Mr. McINTIRE. Well, it serves as perhaps an incentive.

Mr. MILLER. But I really think that if the SCS program had been sold to these farmers to the extent that insofar as they feel they can afford to do it, they are going to go ahead.

Mr. McINTIRE. Is there a heavy workload ahead of your technicians?

Mr. MILLER. Yes, there is.

Mr. McINTIRE. Thank you very much.

Mr. ANDRESEN. Thank you for your statement.

Mr. MILLER. Thank you.

Mr. ANDRESEN. Our next witness will be another distinguished gentleman from Kansas, one of our well-known colleagues, Mr. Errett P. Scrivner.

STATEMENT OF HON. ERRETT P. SCRIVNER, A REPRESENTATIVE IN CONGRESS, FROM THE STATE OF KANSAS

Mr. SCRIVNER. Than you, Mr. Chairman.

I may say at the outset that I am not a farmer, although there was a time in my earlier years when I was quite proud of the job that I could do with a plow.

I think it is quite well that the committee is discussing these measures at this time, because it is a great value not only to the farms of America, but to the nation as well.

Whether or not I can contribute a great deal to your thought may be some question of doubt; but I may say at the outset that in the second district of Kansas comprising nine counties, there has been a very fine cooperation in the soil conservation program.

I have lived in that area for practically all of my life, and particularly for the last 32 years I have had ocacsion to become quite well acquainted with many of the areas, having visited there, having hunted over much of the territory; and it has been not only interesting,

but enlightening to see the changes that have taken place in many of these communities because of the fact that the soil-conservation practices have been followed.

And in connection with soil-conservation practice, I would like to call attention of the committee to the May issue of Reader's Digest, which you may have already seen—if you have not, I think it is well worth reading in connection with these hearings—in which it tells the story of one man's own program of soil conservation on his farm, not perhaps because of Government sponsorship, but because he had a very deep and abiding love for the soil.

And, of course, always at this stage of the game, and this season of the year, one of the things that become uppermost in the minds of many of the members of the House and Senate, is a matter of flood control.

There is not any dispute about the need for flood control. The big question is how shall we get it? Or perhaps it should be: How can we best get it?

So, that there are many practices which have a very important part to play in this program.

I might say in passing that the Kansas State Legislature in its last session did enact watershed legislation, all of which cannot, of course, be seen, because there has not been sufficient time to put it into practice. But primarily, I would like to call the attention of this committee to a portion of a report dated March 25, 1953, a report issued by the Missouri Basin inter-agency committee, with which you gentlemen are acquainted, composed of the 10 governors of the Missouri Basin States plus representatives of the various agencies that have to deal with the basin program.

It is a fairly recent report, and it was unanimously approved by the subcommittee.

I am not going to burden the record with reading all of the report, but I do want to call attention to three paragraphs which I believe are of primary importance. And in this report it states that the Corps of Engineers and the Department of Agriculture officials are in agreement in the Missouri Basin that comprehensive soil-conservation programs are needed and should be accelerated for the preservation of our soil, increased and stabilized agricultural production, reduction of erosion and sediment, and for runoff retardation, and that measures be installed for flood-damage reduction in the watersheds where soundly justified by economic and other considerations.

In other words they say in that portion of it that all these things are necessary to do the job and they continued: These upstream programs are a needed complement to the downstream control works.

In other words, one works with the other.

But they are not a substitute, since they will not stop major floods nor avert flood disasters on larger streams and major rivers. They will have minor effects on disaster type floods as were experienced in the Kansas-Missouri Valleys in 1951 and 1952.

I think I might say further that they would have only minor effect in some of the other annually recurring floods which were not of such great catastrophic character as those of 1951 and 1952, but which do a terrific amount of damage up and down the valleys in Kansas.

Anyone who visited in the Missouri Valley in 1952, anyone who visited in the Kansas Valley in 1951, could not help but be impressed

with the terrific need for flood control, not merely a program which might lessen flood damage, but which will actually control the waters as they accrue.

And continuing on with the subcommittee's report which, as I said a while ago, was approved unanimously by the committee, it is further agreed that the major dams and reservoirs and channels and major works are necessary for control of waters downstream and that these improvements should be undertaken where soundly justified by economic and other considerations.

These downstream measures will not aid in reducing damages from erosion and excessive runoff in headwater areas, and therefore, are not a substitute for watershed programs.

I think that particular portion of the report should be stressed a little more. Anyone who has traveled around as most of you gentlemen have and have seen not only the damage done in the lower valleys, but have seen the source of the runoff waters, who have seen the terrific erosion that results from much of this, can well understand and appreciate probably better than some others, the soundness of this particular phrase.

In other words, once the water has already started down, no matter what program you have in your valleys, it will have no effect, no beneficial effect, at all, upon the watershed runoff. The last paragraph reads as follows:

Both agencies, that is, the engineers and the Department of Agriculture, recognize the capabilities and limitations of the various agricultural practices and engineering structures. Watershed conservation programs make their principal contribution in the upstream areas by improving the land and its productivity and by reducing the destructive effect of uncontrolled surface water runoff on farm and forest lands. Major flood-control structures provide protection to the agricultural, urban, and transportation improvements in the flood plains downstream and provide related benefits from regulation and control of water.

The Missouri Basin interagency committee recognizes that each program has a definite part to play in the overall plan and that heither can be considered a substitute for the other.

There is no single universal panacea for the control of floods.

I read that portion of the report, Mr. Chairman, so that you may have the benefit of that thinking of that commission as you consider these matters relating to the agricultural program.

And seeing the results of their thinking—and these are men who are conversant particularly with this Missouri River Basin—I think their conclusions deserve a great deal of thought and consideration by this committee.

Naturally, inasmuch as my hometown of Kansas City, Kans., is at the confluence of the Kansas and Missouri Rivers so that it is affected whether the flood is in the Kaw Valley or in the Missouri Valley, having seen as I did in 1951 the terrific havoc that was created, where in that Kansas Valley the losses all told probably ran somewhere in the neighborhood of almost a billion dollars or more, where thousands upon thousands of homes were completely destroyed, although thanks to a merciful providence there were no lives lost, and where you have seen as I did, after the flood was over, much of the best valley land that we have completely covered, and for some time out of

production, and then only restored to production by great expenditures, perhaps my thinking is swayed somewhat by those experiences which not only have I seen in 1951, but back through the preceding years—1936, 1909, 1903, and of course, I was not present during the great flood of 1883.

But all of those things, constantly repeating things, with which I have lived so long, of course, make me a little more conversant with the program of flood control as it relates to the basins than I am as it relates to the watershed which is now coming so prominently into the picture.

But I can see even there, affected as I may be by my own personal experience, the great value which may be accorded to this Nation, to the farms, and to the farmers themselves by a comprehensive program much of which is envisioned in the legislation now before you.

I thank you very much for the opportunity of having appeared here. I trust that some of the comments that I have made may prove helpful in the consideration of this legislation.

Mr. ANDRESEN. We thank you, Mr. Scrivner for your very valuable contribution to this hearing.

Are there any questions?

Mr. Albert.

Mr. ALBERT. Mr. Scrivner, I think most everybody except maybe some who are emotionally disturbed on one extreme or the other, approve, in general, the report you read and your own statement to the effect that there is a place for both types of programs of control of flood waters. But don't you think we have been giving the watershed flood-control program too small a cut in this flood-control dollar over the past few years?

Mr. SCRIVNER. I cannot go back over the figures in my mind at this time. Of course, you put your finger on probably one of the things that affects much of our thinking. That is emotionalism. And it is understandable. I do not know how many of you gentlemen went out to the Kaw Valley during the flood of 1951. If you were there and particularly if you had been in a position like I was where you knew so many hundreds of thousands of those people that were personally affected, anybody who could see that and not have his emotions affected would not be quite human.

So, naturally, emotionalism does enter into some of it; but, nevertheless, we are inclined, of course, all of us, to become more or less partisan on the thing that is closest to us and perhaps the thing we know more about.

Now, the watershed program, I think, has a great deal of value as a watershed program. But many of its advocates—and I have heard them talk—I have read many of their comments—many of the advocates of that do not take what I consider a realistic view because they feel that the watershed program is the sole answer to all of the trouble; not only the erosion, but I have heard many of their comments in which they say in no uncertain terms that it will stop all of our floods.

Well, now, that does not, as I try to analyze it myself—it has not been too many years since many parts of our State of Kansas had never had a plow turned to them. The original forests were still there. And yet that was nature's watershed program. And yet we still had the terrific floods.

Mr. ALBERT. That is right. But on the other hand we have this pointed up in my own district where we have one of the largest lakes in that area. And, of course, thousands of people were disturbed by having to be removed from their homes. Now they see the spectacle of silt coming in and filling the upper lake at an alarming rate. So it looks to me like there is a place, if we are going to have these big dams, for agricultural conservation also, not only from the standpoint of giving the fellow up the stream who helps pay the taxes a little protection but also to protect these big structures from siltation.

Mr. SCRIVNER. I think you have got a place for all three of the programs—watershed, soil conservation, and flood protection. I think there is a proper place for all of them.

Mr. ALBERT. Of course, there has been this downstream clamor for big dams. Naturally, if somebody from some lower area wants to build a dam in Oklahoma that does not give Oklahoma any benefit, we do not like it.

Mr. SCRIVNER. That is a perfectly human reaction. All of us have run into that very thing. Maybe not as far as the States are concerned, but many times as far as distance is concerned. One of those programs will benefit our district tremendously, but with the dam in the other man's district—it is always true the people behind the dam that are affected almost always are against it. Those below who are going to be benefited and helped are going to be for it.

I think that is the history of it as far as I have observed it, of almost every dam that has been built in this country. I suppose it always will be. That, of course, is a problem which the gentlemen of this committee must approach in a cool, calm, manner, seeing where one program—how far it should go as it merges into another.

Mr. ALBERT. They have had less than 2 percent if I have been given the right figures for watershed conservation.

Mr. SCRIVNER. I have seen no figures on it.

Mr. ALBERT. I am sure it is not much more than that. It is very small.

And we have got to live with these farmers upstream too.

Mr. SCRIVENER. That is right. And after all, they have a problem just the same as the rest of us.

Mr. GOLDEN. Mr. Chairman.

Mr. ANDRESEN. Mr. Golden.

Mr. GOLDEN. I think Mr. Scrivener's statement has been very helpful to us; and I represent a district in Kentucky that while the floods were not as great as those that you have seen in your State, they were just as devastating on a smaller area.

And I also want to say that I think my colleague, Mr. Albert, is entirely correct in stating that we should put more emphasis upon these watershed programs which have just barely gotten a start.

But I think Mr. Scrivener touched the very point that this committee must finally work out and decided; and that is to coordinate all of these programs. Now, we have advocates that think that the downstream urban protection for floods is the complete answer. Well, we know that is not true.

We know that the engineers have to protect these towns; but we know also that if we control soil erosion and the source of floods, that we have got to have some of these watershed programs working in cooperation with the program of the Army engineers.

And even when you go to the watershed program, you have the various departments of agriculture—the forestry department, and other departments—that seem to think that their program is the complete answer.

It appears to me that there is a great national problem here; that tremendous and continuing damage is being done all over this Nation by not controlling the floodwaters that not only wash our topsoil and deplete the source of our food, but that do devastating damages to our cities and towns downstream.

It appears to me that we ought to make a concerted effort to coordinate all of these programs; and that we certainly ought to emphasize, implementing these watershed programs and getting them under way as quickly as possible.

Mr. SCRIVNER. I agree with you exactly, Mr. Golden. And if this committee, in consideration of these measures, does no more than to bring the various governmental agencies that have to do with these problems together and get them to agree upon a program without their overlapping programs plus the fact that so many of them become so partisan, so protagonist for their own program that they cannot see any of the value of the other—if you do no more than to bring them in and get them all sitting down around a table and see the value of each program, get them to admit that each program does have value, and that theirs is not the only program, I think you will have made a tremendous contribution to this measure.

Mr. GOLDEN. I agree with you there. But I think this committee and other Members of Congress have to get enough cooperation from our colleagues to get enough money to put this program on its feet.

You are going to have to have some money to save this Nation from the destruction of floods. We cannot do it by just appropriating a little here and there. We have to save some of the money that this great Nation has to initiate this program that is of benefit to all the people of America.

Mr. SCRIVNER. Thank you very much.

Mr. ANDRESEN. Thank you, Mr. Scrivener.

Our next witness will be Congressman Charles B. Deane of the great State of North Carolina.

STATEMENT OF HON. CHARLES B. DEANE, A REPRESENTATIVE IN CONGRESS FROM NORTH CAROLINA

Mr. DEANE. Thank you, Mr. Chairman, and members of the committee.

I do not have a prepared statement, but I welcome this opportunity to appear before you. I am not like our splendid colleague, Mr. Miller who spoke before you, who is the owner of 848 acres.

I do not know whether I can make very much of a contribution to your study of this control of fast running water; but I do welcome the opportunity to express a few views. An I certainly want to say in the first place that I am grateful that this distinguished committee has seen fit to solicit the interests of Members of Congress in a program which is designed to help protect our soil.

I recall at the present time that Dr. Hugh Bennett who you might say was the founder of soil conservation and I were born in the same

county. He is a constituent of mine. And I recall the fact that the first soil conservation district was located in our county—our congressional district.

Here is a map of North Carolina and a few crude lines are drawn on it. The First Congressional District was in this area of Anson County, the native county of Dr. Bennett, known as the Brown Tree Soil Conservation District, as I recall it.

And I think my remarks would be far from complete if I did not at this time pay an everlasting debt of gratitude that I feel for this man of the soil, and who perhaps has done more than any other living American to bring to the attention of not only America, but the entire world, the necessity of trying to preserve our soil.

I mention this map, Mr. Chairman, to point out a few significant facts concerning this particular area of North Carolina.

My congressional district falls within the two red lines stretching across the State. I live in the lower end. And my district extends up almost to the Virginia line.

At the present time, we have been trying for a number of years, ever since I have been in Congress, beginning now my fourth term, to try to get some action on trying to protect that particular area. You will notice a line here beginning up here and extending—circling all the way through. That is a river. It begins in the foothills of the Blue Ridge, and is known there as the Yadkin River. It proceeds down to a point below this dam, and then you come into the area here of another power dam, and it changes to the Pee Dee River. And then it extends through South Carolina on into the Atlantic Ocean.

And if I may, Mr. Chairman, for the record I would like to submit a map of this overall Pee Dee watershed which was prepared by the Soil Conservation Service designated as a map of the Pee Dee watershed above Rockingham, N. C., in Virginia, North Carolina, and South Carolina.

Mr. ANDRESEN. We will be glad to receive it.

Mr. DEANE. Thank you, sir.

(The map hereinbefore referred to is as follows:)

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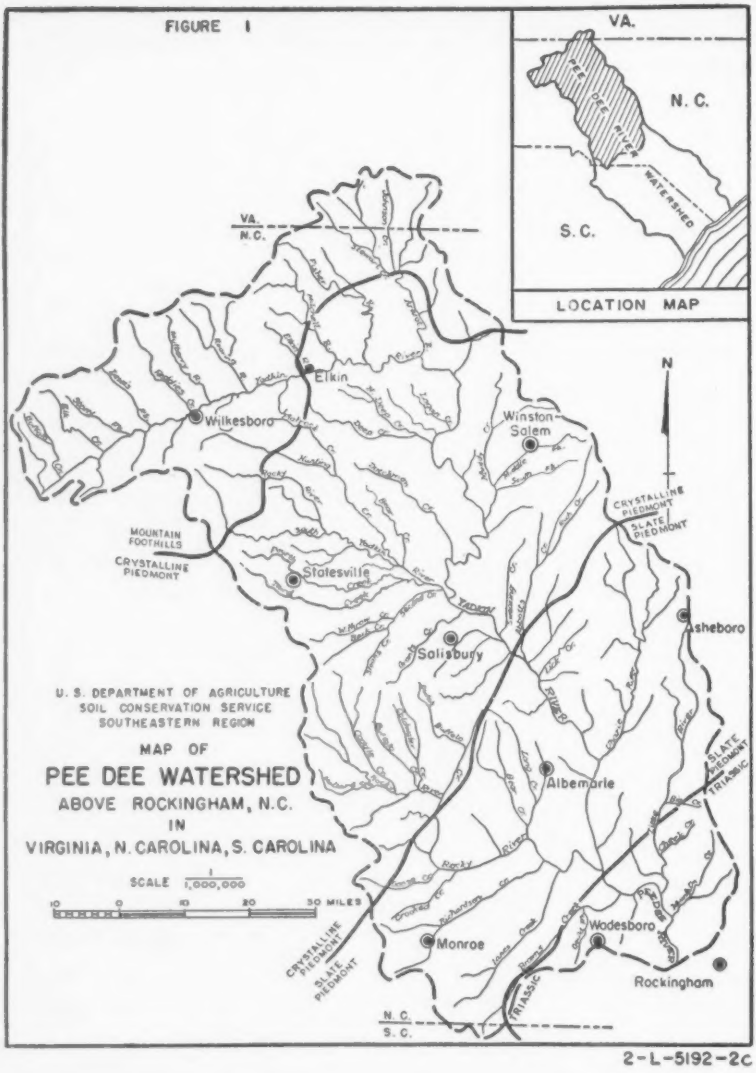


Mr. DEANE. You will notice some curved lines coming into this area of my district in North Carolina. It comes in—there are one or two congressional districts. Congressman Chatham to my right, and Congressman Alexander to my left. The principal area, however, flows through my congressional district. Year after year, the annual damage is estimated by the Department of Agriculture, its various agencies, and the Army engineers, is approximately $250,000.

In 1943, August of 1943, there was a flood that started where those marks appear, a flash flood, and in the course of 24 hours or less, $3½ million worth of damage resulted.

Along the lines of the former witness, our colleague, Mr. Scrivner, and the exchange of views expressed by the members of the committee, I would like to tell you what has happened in this area of the Blue Ridge of North Carolina. And I think as you study this subject you have got to think in terms of the territory or areas of land; because what may be good for Kansas may not be good for North Carolina.

The timber butchers have gone into these wonderful areas and have purchased this property; and they still own it mainly. No one wants to buy it, because the timber has been cut to the point where there is practically none left.

And when these rains come, they begin to soak into the hills of these mountain slopes, caves; and the water goes inside of the mountain, so to speak, into these crevices, and perhaps thousands of gallons of water accumulate; and then in a matter of minutes, the whole mountainside rushes out.

That is what happened in August of 1943. And sometimes, instead of word pictures, actual photographs may give you some idea of what that damage was. I would like for the members of the Committee to look at these pictures if they will which indicates what took place in this particular flood of August 1943 at which time this $3½ million damage took place.

As you study those pictures, you will see that it is principally an industrial area and a wonderful little city in the upper part of my district—Wilkesboro and North Wilkesboro.

This damage extended on into Elkin, N. C., which is the district of Congressman Chatham. Now, I am not contending that the flood detention dams will bring the final answer. But I do say that purely soil conservation will not bring the answer. I agree with Mr. Scrivner who appeared before you a little while ago, that we are going to have to think in terms of some type of a combined effort.

And I realize that every time you build a dam, there is going to be opposition.

I am faced with a problem right now in my own district, the great Fort Bragg Military Reservation; they say that they have to have more land; and they are going to move in, it looks like, and take half of a county in my district. It involves in the neighborhood of 2,500 people. So as we think in terms of protection, I think we are going to have to take a position on the basis of what is right instead of who is right.

And I come here today not advocating any special program but that I feel that the time has come when we are really going to have to come to grips with this subject in a very forceful and a very concrete way.

Now, I think in general, Mr. Chairman, that finishes what I have to say, with the exception of directing your attention to point up what I have just said that dams and soil conservation is essential.

If you will notice here, there are four cross marks. They represent great hydroelectric private and public power projects by different power companies in North Carolina.

Now, this is what takes place when these flash floods come. They start up here in the hills. There is very little soil to protect. They come right out of the mountain, and from the mountains to these cities and towns.

People can go to bed at night, and the next morning, their whole area from these pictures you have seen, can be under water. Well, now, they depend on water, and the more water they have behind their dams, the happier they are. And I support their position in the matter insofar as furnishing electric current. This dam holds this water until it is full. And it is gradually let off until this one is full, and this one, and this one. And then when that water begins to flow over those dams, I have known people to be called at 2 o'clock in the morning to be told—in between those dams—"get your cattle out of the valleys, because we are going to have to open the gates."

However, this particular area right in here, below these particular dams in this soil conservation district that I have pointed out, this area, is under control: but from this dam here at Hydro into this serious area of our State of North Carolina, it is facing a gradual destruction; and when I speak in terms of destruction, I do so advisedly, because an annual loss continually of $250,000 a year is something to think about.

And, furthermore, business organizations are not going into this particular area to erect plants and other facilities.

I am grateful for this opportunity to appear before you and lend whatever support I can to the effort that you are making to try to point up the necessity of doing something in a very concrete way. And I realize there may be a conflict of interest between the Committee on Agriculture and the Public Works Committee; but I do feel that there should be a common ground where we can get together and begin to look at this in a very straightforward and honest manner.

Mr. ANDRESEN. We thank you very much for your statement.

The Chair has the statement from Hon. Phil M. Landrum, of Georgia, and also a letter from the Chamber of Commerce of the United States which will be included in the record at this point.

(Letters referred to are as follows:)

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington 6, D. C., May 6, 1953.

HON. CLIFFORD R. HOPE,
Chairman, House Agriculture Committee,
House Office Building,
Washington 25, D. C.

DEAR MR. HOPE: The Chamber of Commerce of the United States favors the principles embodied in your bill, H. R. 4877, being considered by the Agriculture Committee, to authorize the Secretary of Agriculture to cooperate with the States and local agencies in planning and carrying out works of improvement for soil conservation, and for other purposes.

The traditional methods of flood control have been by levees and big dams after the floodwaters have become channelized in the large streams. The chamber believes that more should be done toward flood prevention by retarding the water on the land at or near where the rain falls, through soil-erosion-control practices, small check dams, and water-spreading devices.

We believe that each subdrainage area should make its own determination of where emphasis should be placed and how remedies are to be applied, and should share the costs with the Federal Government according to the benefits received. This principle is recognized in the Hope bill.

On the basis of policy statements adopted by our nationwide membership, the national chamber strongly supports H. R. 4877.

We request that this letter be made a part of the record of your committee hearings.

Cordially yours,

CLARENCE R. MILES.

P. S.—Your attention is invited to the section on flood control (pp. 10–11) in the enclosed pamphlet, Our Water Resources.

STATEMENT OF HON. PHIL LANDRUM, CONGRESSMAN FROM GEORGIA

Mr. Chairman, I appreciate this opportunity to appear before your committee in support of a most important piece of proposed legislation, H. R. 4877. After a study of the bill under consideration I realize that you are giving serious consideration to changing our flood-control program from one of planning to one of doing. Control of water, soil-erosion prevention, and protection of our upstream areas is essential. We cannot otherwise preserve and restore our great wealth of natural resources.

The Chattahoochee National Forest is in my district of Georgia. Naturally, I am interested in the administration of this vast area of timberland and any action that might affect flood control or management of the area. While I am in complete accord with provisions of the bill authorizing the Secretary of Agriculture to carry out plans and works of improvement with local organizations, I do urge that consideration be given to authorizing the Secretary to initiate and carry out flood-control works of improvement on the national forests or other public lands under his jurisdiction. Many of the forests are in isolated remote locations and local organizations are nonexistent or unable to meet any requirements that might be necessary for participation in flood-control work should such work be needed. For this reason, I believe your committee would strengthen the proposed legislation by making adequate provisions for the Secretary to initiate any needed flood-control work on the national forests.

Respectfully submitted.

PHIL M. LANDRUM,
Member of Congress.

Mr. ALBERT. Mr. Chairman, I would like to make one comment. This has been a fine statement from our colleague from North Carolina; but, if I understand it right, these floods that are causing the trouble are flash floods. And the statements I have had from engineers are to the effect that you cannot control flash floods.

Mr. DEANE. Well, the Army engineers say in this particular case that you can. The only problem there is that when you rule out dual purpose, then they get to the point where they cannot justify, they say, the operation. So it is a question of whether we are going to allow one area of a country to wash away—and I do not think that this is the only particular instance involved—the dams that are recommended for that particular area are flood-control detention dams.

In other words, when these flash floods or these excessive rains appear to be developing, the dams would be closed, and then would be opened afterward.

Mr. GOLDEN. I have one question.

Did you think that this upstream watershed program that is now underway would help your district, or what do you think is the remedy for that condition?

Mr. DEANE. Mr. Golden, as I see it, and as I tried to point out, here are several large towns of Wilkesboro, North Wilkesboro, heavily populated; in the previous years, those mountainsides were covered with timber. The valuable timber now that was there in years past is gone. And the land is not suitable for cultivation.

Just how long it would take to grow trees, I do not know. And the present owners are not planting any trees up there. So it is my feeling that the only way that you can begin to immediately stop those waters, would be to have some type of sand and cement in the form of detention dams—flood-control detention dams. There would not be a permanent reservoir, but would be closed when these flash floods appear and hold that water temporarily and let it out gradually down into the area which spreads out all over this area.

Mr. GOLDEN. You mean in the upper watershed to keep it all from coming down into the valley?

Mr. DEANE. That is right.

Mr. McINTIRE. Mr. Deane, in view of the fact that these flash floods originate largely in areas which were or which are now of little commercial value, if there is not much growth there and in view of the fact that you comment as to the importance of the economy further downstream to the economy of the State, would it not be possible that these areas be bought up by the State and managed by the State as a district?

Mr. DEANE. Of course, right about this line—this is the Blue Ridge Parkway—and it is right in the edge of that great area of the Blue Ridge Park area, which is controlled by the Federal Government; and had the program been extended or carried forward, this particular area likely would have been brought into that Federal overall program of western North Carolina and eastern Tennessee.

I often wonder whether they would be willing to go into it.

Mr. McINTIRE. It is of vital importance to North Carolina more so than, you might say, to New England. And it being a flash-flood type of a problem, it just occurred to me that being land which is of no material economic value that the State might attack the problem as a State issue.

Mr. DEANE. Thank you, Mr. Chairman.

Mr. ANDRESEN. Our next Witness is Mr. C. N. Granger, representing the American Forestry Association.

STATEMENT OF C. M. GRANGER, OF THE AMERICAN FORESTRY ASSOCIATION

Mr. GRANGER. Mr. Chairman, I am sorry that I do not have a prepared statement to give to the committee. I was asked by the association so very recently to represent them in an emergency capacity that I had no time to prepare a statement.

The association is in the process of installing a new executive director who would ordinarily represent them on occasions such as this; but he will not be on the job until a few weeks later.

The American Forestry Association, as members of the committee perhaps know, is the oldest and largest of the conservation groups which have been fostering forest conservation that has been in existence for something over 75 years. It had a great deal to do with the creation of the national forests. And it has been working in many of the same fields in which your committee is now taking such an active interest.

It is highly gratified at this evidence on the part of your committee of its lively and continuing interest in the broad field of resource conservation in which so much has been accomplished before; and particularly in your evident effort to get this upstream flood-control program off dead center and put it in a position where it will participate more adequately in the total effort to reduce or control floods with the collateral benefits of soil-erosion prevention and the protection of the soil, and that goes with it.

The association has a rather elaborate program of projects in which it is interested.

Some of those that are foremost at the present time are related to such things as what I might call the legal misuse of the mining laws as they affect the federally owned lands, especially the national forests, in which this committee has already evidenced some interest, and which seems to the association to warrant very vigorous corrective measures.

The association is deeply concerned with the annual toll taken by forest insects and diseases, which in the average year destroy a much larger quantity of valuable timber and forest than forest fires do.

There is a great deal to be done there in which the committee might interest itself. The association is trying to promote community forests as a means of developing more local interest in forestry as a productive land use.

It is trying to increase the importance and influence of State forestry associations as a method of furthering the general objectives of forest conservation. If I may speak very briefly about the measure which has been introduced by Chairman Hope, it seemed to us that as some of the witnesses before your committee have already indicated, that it could well be amended so that work might be undertaken on federally owned land such as the national forests, some of the areas held by the Soil Conservation Service, without requiring that the initiative be taken by local community groups or that they must agree to operate and maintain the works; because there are many sections in which flood-control operations at the headwaters of streams, some of which are interstate in character, are needed on land which is predominantly in Federal ownership. And it would be very desirable if that could be covered in this legislation because, among other things, I fear that it would be quite difficult to get adequate appropriations for that purpose under more general authorizations when such a specific authorization as this bill contemplates may be in existence.

So, I hope that the committee will be willing to consider the amendment to the bill to bring that about.

Mr. GOLDEN. May I interrupt you there. I think that is a good point; and I think if you would furnish an amendment to the committee, it might be helpful when we consider that in executive session.

Mr. GRANGER. Mr. Golden, yesterday that question was raised, and the Chair requested a representative of the United States Forest Service to submit an amendment, the language for that purpose; so I believe that will be done.

Mr. ANDRESEN. I am informed that that amendment went into the record as proposed yesterday.

Mr. GRANGER. Fine. Well, Mr. Chairman, I know that it is close to the hour when you adjourn; so I shall not take any more time in behalf of the American Forestry Association except to say that it wishes to be of all the assistance it possibly can to your committee and we will be very happy to be called upon at any time that you think its good offices may be useful.

Mr. ANDRESEN. We thank you very much, Mr. Granger.

(The following statements were submitted for inclusion in the record:)

STATEMENT OF HON. A. OAKLEY HUNTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Chairman, it always pleases me to observe new milestones in the conservation of our natural resources. And in my opinion this bill, H. R. 4877, promises to be one of them. Flood control is a major conservation activity and this bill provides for action right on the ground where it is needed. Therefore, I compliment the author and the committee for the attention they are giving this vital subject.

If I may take the liberty, I respectfully call the committee's attention to a point on which I believe the bill can be strengthened. As I read it now, there is no provision for applying the benefits of this bill to the national forests and other Federal lands without the approval of local communities or other local authorities.

I most certainly want local people to participate in flood-control activities. We also realize that what is done on Federal lands may be of vital importance to people far removed from the nearest local communities—water supplies may be be affected even in other States. As an outstanding example, heavily populated areas in my own State, California, are critically dependent for water from national forests and other Federal lands as far away as Colorado. It does not seem consistent with the high purposes of this bill to give local communities either approval or veto power over flood-control measures of vital importance to those so far away that they have no voice in the matter. Therefore, I suggest to the committee that the bill should include a provision authorizing the Secretary of Agriculture to inaugurate necessary flood-control measures on Federal lands under his administration.

STATEMENT OF T. W. FERGUSON, DIRECTOR, YADKIN-PEE DEE SOIL CONSERVATION AND FLOOD CONTROL ASSOCIATION, FARMER AND SPECIAL DEPUTY OF THE NORTH CAROLINA STATE GRANGE

My purpose in presenting this testimony is because I am vitally interested in conserving and protecting our soil and water resources of my State and Nation.

I am a farmer living in Wilkes County, N. C., on the upper watershed of the Yadkin River. I was born and reared in the above locality and still do active farming there. I also represent the North Carolina State Grange as its special deputy. I am one of the directors from Wilkes County of the Yadkin-Pee Dee Soil Conservation and Flood Control Association, which organization embraces 17 counties in North Carolina bordering the Yadkin-Pee Dee Rivers. I have been intensely interested in soil and water conservation and timber preservation on my own farm since I was a boy 45 years ago; and have been employing these practices on my own farm for many years and have observed their value with great satisfaction. The principles of terracing farmlands is, we believe, fundamental in preserving soil and conserving and controlling water; and what holds true in a small area, will also prove practical and adequate on large watersheds such as the Yadkin-Pee Dee. However, I believe that whatever program is adopted for the Yadkin-Pee Dee will also prove adequate for a thousand other similar valleys throughout the Nation.

In addition to my having given quite a bit of study to soil, water, and timber preservation in a small way on my own farm, I have also had occasion to give quite a bit of time and study to flood-control problems, especially as they affected my own Yadkin Valley in North Carolina. Since about 1930 the Corps of Army Engineers have made several surveys on the upper Yadkin in Wilkes and Caldwell Counties designed primarily, so it was said, to control floods. I wish to submit to your honorable committee some data gleaned from the reports of the Army engineers on these surveys and proposed projects, only for the purpose of comparing these methods of flood control with those proposed and being proposed by the Department of Agriculture and the United States Soil and Water Conservation Service. A power dam, to have been located just west of the town of Wilkesboro, was first proposed about 1944 which was designed to be a dual purpose dam. This dam was to be located in the heart of a very fine agricultural section of Wilkes and Caldwell Counties and since the project would inundate about 8,000 acres of valuable farmlands, destroy many homes and communities, highways, etc., considerable opposition arose against such a project. Then, too, according to the reports of the engineers, the project would pay less than 1 percent on the investment, it was summarily abandoned. A resurvey was made by the engineers in which four large detention dams were proposed on the Yadkin and on Reddies River, a tributary of the Yadkin.

Based on 1946 price levels the cost of the four detention dams would be $7,194,000. This project was authorized by Congress in 1947, but thus far no funds have been appropriated for construction save a relatively small amount for planning on one dam on Reddies River. This project was designed to give flood protection to industry and farmlands as far down the river as the little town of Donnaha which is about 40 miles below the proposed dams. The protection was to be 75 percent industrial and 25 percent agricultural according to Army reports. About 8,000 acres were to be inundated and the protection was to give partial protection to 6,000 acres below the dams. The watershed of the Yadkin above Donnaha comprises 500,000 acres, 175,000 acres of which are above the proposed dams. Based on 1946 price levels the annual estimated cost of maintenance of the 4 dams was $25,000. The entire estimated annual benefits were $172,000, according to Army reports.

According to statistics taken from the United States Bureau of the Census report for the fiscal year 1944 and 1945, the 8,000 acres of farmlands and timber-

lands to be inundated and ruined for profitable agriculture, produced $2,222,000 worth of farm and timber products. The estimated loss of taxes from the Government-owned lands in the project was about $20,000 annually. According to the Army reports and conclusions, the inundated farmlands might be utilized for agricultural purposes, except when it was necessary to flood the lands, when there was excess floodwaters. According to all agricultural experts the inundated lands would be rendered practically worthless for practical and profitable agriculture. Several hundred homes, numerous villages, schools, and about 35 churches would be entirely dislodged or partially affected. No protection was designed to be given to the vast area in the watershed above the shoreline. The conclusion is that only the 6,000 acres below the dams would be given protection and this was designed to be only partial; and this would be one-eightieth of the entire watershed of 500,000 acres. About 60 miles of Federal highways and an equal amount of State highways would be inundated and ruined for travel and would have to be replaced at an enormous cost over rough terrain outside the shoreline. According to Army reports on the detention dam project for the upper Yadkin River watershed, the Army engineers were able to muster only a $1.01, a margin of only 1 cent on the entire investment.

Therefore, from the Army report, and from the statistics taken from the United States Bureau of the Census and other contributing factors, the logical conclusion is that this project and other similar projects are colossal economical blunders and grossly impractical and should be abandoned for more practical methods of flood control.

The public works department in conjunction with the United States Department of Agriculture and Soil Conservation Service, as your honorable committee no doubt well knows have made extensive surveys on the entire Yadkin and Pee Dee watershed embracing parts of Virginia, North Carolina, and South Carolina designed for the protection of our natural resources and flood control.

From these investigations and surveys the following costs and benefits have been computed and evaluated and funds are now requested that this project may be started at a very early date.

The total cost of this project over a 20-year period including some maintenance based on 1946 price levels in round numbers is $20 million. The report indicates that the estimated total average benefits from the program would be approximately $11 million. Of this $11 million estimated benefits for flood control would be $1,500,000. Associated benefits from erosion control, conservation farming, and woodland management would be $9,500,000.

The report further states that these benefits include annual benefits which also would be obtained by the proposed flood-control reservoirs authorized by the Corps of Army Engineers of only $27,000. The computed ratio of total benefits to total costs at adjusted price levels is stated to be 5.6 to 1 before discounting deferred benefits from land-treatment measures and 3.66 to 1 after discounting such deferred benefits.

In this program, which is being partially sponsored by the Yadkin-Pee Dee Soil Conservation and Flood Control Association, all conservation methods employed help flood control. There is no Government-owned land, no dislodgment of homes and communities, no loss from taxes, no one hurt, or damaged, but everyone including industry and agriculture, benefited alike, over every watershed adopting such a program. Numerous small reservoirs and fishponds will retard and impound more water by far than large dams and the cost is much less. I wish to add this statement that all farmers, industrialists and professionals are 100 percent for this program in the Yadkin-Pee Dee area.

It is not my purpose to say that large dams are never necessary in flood control, but if they are built at all they should be located in strategic points where they will not inundate or damage fine agricultural lands. The Government now owns the equivalent of 21 States and continued Government ownership should be stopped in all cases where not necessary for the public welfare. Ninety percent of our soil is of the mountain or hill type while only 10 percent is of the alluvial or river bottom type. Protect the mountain or hill type and the bottom lands will automatically be protected.

It is authentically reported that out of every $100 appropriated for flood control the Corps of Army Engineers and the Department of the Army has used $94 of this amount, while Soil Conservation Service has used only $6. Of course farmers have cooperated in the soil conservation program, which they will also do in the program now proposed for the Yadkin-PeeDee watershed program and all similar programs. It is also reported that soil conservation methods have stopped and slowed down actually more water with the $6 than the Army has with $94. No more land is being made, and we need to conserve

what we have with our population increasing at the rapid rate of 2½ millions annually.

I therefore conclude that there are two important elements to be given careful consideration in any flood-control program. One is the human element and the other is economic. Adopt a program that will dislodge, and disrupt as few homes, communities, and farms as possible and one that will be economically sound; a program in which the remedy will not be worse than the disease.

STATEMENT BY F. L. GERMAN, LENOIR, N. C., VICE-PRESIDENT, YADKIN VALLEY-PEE DEE SOIL CONSERVATION AND FLOOD CONTROL ASSOCIATION

Mr. Chairman, I am grateful to your committee for this opportunity in which to comment in behalf of the fine people I represent who comprise an organization known as the Yadkin-Pee Dee Soil Conservation and Flood Control Association. This organization embraces 17 counties in Piedmont North Carolina, extending to the headwaters of the Yadkin River. I am a landowner in the Yadkin Valley. I am a resident of Lenoir, N. C., where I am engaged in business. My statement will be brief and rather general.

The people of my area are descendents of pioneer settlers who are God-fearing, industrious and progressive Americans, looking for neither handout nor easy living. We believe in the traditional American way of life and bitterly oppose any and all alien ideologies.

During the past several years, matters of conserving water and soil and controlling floods have come to the forefront for obvious reasons in the minds of our people. This is especially true in the upper Yadkin Valley. Much has been said and written about huge dams, dams which if constructed as the Corps of Engineers advocate for the Upper Yadkin Basin would have already blotted out and destroyed one of the finest agricultural sections of America. Ours is a beautiful and productive area. It is thickly populated with fine schools, roads, churches, industries and institutions. All would have been but a memory now if this program had been consumated. Unrest, confusion, and discouragement has reigned among our people while this threat, under the guise of flood control but which we contend is a ridiculous pretense, has hung over our heads the past many years.

Lately, but we hope not too late, has come a feeling that a more practical approach to conservation of water and soil is being considered. We also feel that the Army engineer's proposal for huge damming structures is less likely to be carried out. While we all favor flood control, we don't want to sacrifice fine farm lands needlessly. With an ever increasing population there is none to spare.

Our area is endowed by nature with an ideal climate, fertile lands and a plentiful supply of pure water. However it is with concern we note that our streams have a growing tendency to flood during rainfall while during periods of dry weather run less bold. Perhaps it would be safe to say that many of our mountain streams average normally half their size of just 20 years ago.

This is alarming. We know we gaze upon a major cause; namely the expansive Blue Ridge Mountain slopes which have been made partially barren in recent years by promiscuous lumbering practices. We could say much more on the subject. Suffice it to say it may be later than we think.

In conclusion, Mr. Chairman, allow me to state we are pleased and proud that the Congress of the United States through your committee and the Department of Agriculture is giving consideration toward measures which will eliminate this basic and age old problems of soil and water dissipation by a practical, workable and sensible approach through hill to hill, valley to valley, and farm to farm treatment of our watersheds and institution of practices designed to hold more water on the land where it falls, thereby slowing the presently accelerating movement of our precious resources of soil downstream and ultimately out to sea.

Our people desire to go on record as representing a united front favoring this sort of legislation as the remedy. We believe this is the only practical solution to our problem and we also believe it is the duty and prerogative of the Federal Government to launch the program through the United States Department of Agriculture.

We are further convinced that Hope bill 579 if enacted into law will be the answer to our needs.

Mr. ANDRESEN. The committee will stand adjourned until Monday at 10 a. m., to hear the watershed associations.

(Whereupon, at 12 noon, the committee adjourned, to reconvene at 10 a. m., May 11, 1953.)

SOIL CONSERVATION AND WATERSHED PROGRAMS

MONDAY, MAY 11, 1953

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10:05 a. m. in Room 1310, House Office Building, Representative Clifford R. Hope (chairman) presiding.

Present: Representatives Hope (chairman), Andresen, Hill, Harvey, Lovre, Belcher, McIntire, Golden, Williams, King, Poage, McMillan, and Wheeler.

The CHAIRMAN. The committee will come to order.

The committee has met this morning to continue and conclude its general hearings on soil conservation and the watershed program. We have a number of witnesses this morning from the State of Kansas, representing various watersheds in that State. We also have with us Mr. Anthony W. Smith, assistant general counsel of the CIO, who desires to make a statement on behalf of that organization on watershed programs, and particularly on the bills introduced by Mr. Poage and myself.

We will be glad to hear you at this time, Mr. Smith.

STATEMENT OF ANTHONY W. SMITH, ASSISTANT GENERAL COUNSEL, CONGRESS OF INDUSTRIAL ORGANIZATIONS

Mr. SMITH. I appreciate this opportunity to speak very briefly. I will not take much of your time. I am Anthony W. Smith. I am assistant general counsel to the CIO here in Washington, and I am secretary of our CIO committee on conservation.

We have been interested in these problems of soil conservation, watershed stabilization, and flood control for quite a long time. We have been specifically interested in the problems of a number of the people who are here today from the Blue River Valley in Kansas. A good many of the labor-union people in Kansas City were injured either in their jobs or their homes or in other ways in the floods in 1951, but we did not allow ourselves to become victims of the propaganda of the Corps of Engineers to the effect that the Tuttle Creek Dam was the answer to that problem.

We realized that Tuttle Creek is not the answer and we have opposed, and are still opposing, any appropriations for Tuttle Creek and would like to see the previous appropriations and authorization rescinded. We want to back up the farmers of the Blue River Valley all along the line in that proposition.

We are, of course, interested in flood control. However, we know that we have got to get the floods under management so that they

don't do the kind of destruction that the 1951 flood did in Kansas City and the 1952 floods farther up the Missouri River, and so forth. We favor the kind of legislation which has been introduced by Congressman Poage and Congressman Hope, looking toward the prevention of floods by proper work on the land. We have already sent messages to the Appropriations Committee with regard to appropriations for the small watersheds all over the country, 48 test watersheds, and the group of 7 and 11 watersheds that are already being worked on by the Department of Agriculture and the Soil Conservation Service.

We believe a general program which will make it possible for the Department of Agriculture to go ahead with that kind of work more vigorously in the future is highly desirable. The work must be done by an expanded program of soil conservation, reforestation, and the construction of large numbers of small detention dams and check dams throughout the entire watershed.

If this is done we think that we can prevent floods in that way. As a matter of fact, Congressman, it would seem to us that there would be really no necessary limit on the extent to which floods can be prevented in that way. No doubt there are peculiar situations, but for the most part it seems to depend on the number of check dams and detention basins that you have, the size of them and their design for purposes of holding water. If one combination does not completely do the job, it would seem that more intensive management along the same lines ought to do the job entirely. That is perhaps too sweeping a statement.

The CHAIRMAN. I believe that is where we ought to start, where the water falls.

Mr. SMITH. Very definitely that is where we ought to start. We feel that all the people of the country, the city people and the country people, have an equal stake in getting that work done, getting it done that way. We certainly want to back that program up in every way we possibly can.

The CHAIRMAN. You no doubt have given consideration in the course of your study of this matter to the great interest that the people in our cities have in city and domestic water supplies, which is getting to be a very serious matter in many of our urban areas. I am sure that you agree with the proposition, relative to watershed programs; that in the overall it is of equal importance to the people in the cities as it is to the people in the rural areas to have a program which not only prevents floods, but conserves water in the places where we need water and where it will be available for domestic and urban uses.

Mr. SMITH. Very definitely. A program which conserves the water and which conserves the soil and which builds up the agricultural resources, our food supply, and all those things, are part of this program. It seems to us that it is one which we as city people by and large have as much of a stake in as people actually working the land.

This is very definitely our national program for flood control.

We would try to get away from the idea that floods are to be controlled by big dams and we would say that they are prevented by watershed work. We could prevent floods by watershed management, watershed stabilization, and do other things, conserve our water supply, our soil, and our woodlands and so forth.

Thank you, sir.

The CHAIRMAN. Do any members of the committee desire to ask questions? If not, we thank you very much, Mr. Smith, for your statement.

Mr. SMITH. Thank you, sir.

(The following telegram was submitted for inclusion in the record of the hearing:)

WASHINGTON, D. C., *May 8, 1953.*

Hon. CLIFFORD R. HOPE,
House Office Building, Washington, D. C.:

The CIO strongly supports legislation whereby the Department of Agriculture would be authorized to cooperate with and assist local organizations in conservation and land-treatment measures, including small structures, for flood control in small watersheds. Urgent this program move forward as rapidly as possible with bipartisan support.

NATHAN E. COWAN,
Legislative Director, National CIO.

ANTHONY W. SMITH,
Executive Secretary, CIO Committee on Regional Development, and Conservation Assistant, General Counsel, CIO.

The CHAIRMAN. Next we will hear from Mr. W. I. Boone, of Eureka, Kans., the vice president of the Kansas Farm Bureau.

STATEMENT OF W. I. BOONE, VICE PRESIDENT, KANSAS FARM BUREAU

Mr. BOONE. Mr. Chairman, members of the committee: it is a great privilege to represent the 65,000 farm families, members of the Kansas Farm Bureau, at this hearing on this watershed policy discussion. I am sure that all the members of the Kansas delegation appreciate this opportunity to come before this committee this morning. Some of you gentlemen may remember in 1951 a subcommittee of this committee held hearings at Gatesville, Tex.; Colby, Kans.; Topeka, Kans.; and Sioux Falls, S. Dak.

At the Colby, Kans., meeting our president, Herman Prager, appeared before the committee and outlined our organization stand and my testimony will be very similar to what Mr. Prager outlined to you at that time.

The Kansas Farm Bureau for a number of years has questioned the economy and the efficiency of the so-called Pick-Sloan plan. Flood control in Kansas we have desired and said for a number of years that at least the place to start was where the water falls, the upstream areas. We have not opposed the big dams as such but felt that we should start and devote our energies and our money to the upstream areas; we should either do that work first or the work should proceed contemporaneously and an integrated and comprehensive plan should be developed where there would be no duplication of effort. That has essentially been our stand for a number of years, that the place to start is in the upstream areas. What we fail to do with that treatment, what is economically feasible, we will achieve by other methods. We want a coordinated program.

We have no desire to take anything away from the folks in the cities. In fact, we are interested in the industrial and economic development of Kansas. We have more youngsters growing up on our farms than can continue to farm and we would like to find good economic conditions in Kansas where they might continue to live on our State if they should leave the farms.

We know the cities in Kansas need more water than they have had in the past. Kansas has for about a year now been in a drought condition. Allocation of water, particularly in the central Kansas area, is becoming serious. Also, stock water and domestic water supplies in eastern Kansas are critical where we depend largely on surface water. We feel that the same benefits can be engineered into an upstream program as can be provided in the large dam program in the way of conservation of water. But we do feel that it can be made to benefit a great many more people. Just to cite one instance in the eastern part of the State today we will probably never have a great deal of irrigation, but a lot of farmers have bought sprinkler systems for a supplemental irrigation. Our only supply is from our streams. One or two of those on a stream will deplete that stream flow and we are going to have probably court action to determine water rights in our State.

We feel that an upstream watershed program could greatly implement stream flow, not only for the benefit of the cities but for the farmers for livestock water and for a little supplemental irrigation. The problem has been—and folks in Kansas believe in the upstream program—the proponents of the large dam program have said, "Why do you not do something?" I think the members of this committee realize that we have had very little opportunity to implement this kind of work. So I am particularly happy to appear before this committee in behalf of House bill 4877, and also the bill to provide funds for carrying on watershed work in a number of approved watersheds.

Only by doing that can we convince people or really learn the possibilities of upstream work. Without some assistance I think that work will proceed very slowly. My organization supported, along with other organizations, a watershed district law in Kansas which the legislature has approved. So we are now set up where we can proceed with watershed work through organization.

I feel that both of these bills will be of very material assistance in promoting upstream work. It has been a privilege to be here and I thank you very much.

The CHAIRMAN. Are there any questions? If not, we thank you very much, Mr. Boone, for your appearance.

Mr. BOONE. I would like to add, I am sure we have a technician who will appear before the committee. When we look at the tremendous appropriations, the tremendous funds that are planned to control water in the large reservoirs, if we think of that in the terms of watershed work, for instance in the Verdigris Valley, approximately $29,000 per square mile for catching water off of this land, or in the Tuttle Creek area, $87 million divided by 9,000 will be approximately $10,000 per square mile. I am sure that in our area, in the Verdigris Valley, we could not spend profitably that much money.

If we think about the costs in relation to the proposed cost of the big dam program, it will buy a whale of a lot of watershed engineering.

The CHAIRMAN. We thank you very much for your statement.

We will next hear from Mr. Claud Brey, of Ozawkie, Kans.

STATEMENT OF CLAUD BREY, OZAWKIE, KANS., CHAIRMAN OF THE DELAWARE RIVER DRAINAGE DISTRICT, AND CHAIRMAN DELAWARE RIVER WATERSHED ASSOCIATION.

Mr. BREY. Mr. Chairman, gentlemen of the committee, my name is Claud Brey, of Ozawkie, Kans. I am a farmer, chairman of the Delaware River Drainage District, also chairman of the Delaware River Watershed Association.

We are indeed grateful for the opportunity to appear before you gentlemen and give our story of plans for conservation of land and water. The realization of the need for conservation of land and water prompted the organization of our association, the Delaware River Watershed, which comprises an area of approximately 1,100 square miles in 5 counties, namely, Atchison, Brown, Nemaha, Jackson, and Jefferson. This area comprises what is recognized by the United States Department of Agriculture as the most erosive area in the State of Kansas.

If I may, I would like to submit a map at this time locating in northeast Kansas the erosive area, known as the glacier soils of Kansas.

The CHAIRMAN. That is the area marked in yellow in the upper right-hand corner?

Mr. BREY. Yes, sir; and the blue ring around the Delaware watershed. That is regarded as the most erosive area in Kansas. The United States Corps of Army Engineers have proposed what is known as the Perry Reservoir, a comparatively short distance upstream from where the Delaware River flows into the Kansas River. This proposed reservoir in the survey in 1948 called for an expenditure of approximately $12 million; the destruction of 125 farms or 1 out of every 15 of the county, a like percent of the farm homes; upward of 19,000 acres of the most fertile soil in the county, dislocating 1 entire town of 300 and parts of another, also several schools, churches, and business establishments.

We are all interested in so-called flood control. However, we are more vitally interested in a program of flood prevention. Our organization—namely, the Deleware River Watershed Association—is formed for that purpose. Our organization within the area of the Delaware River, as we have stated, occupies some parts of five counties. This map shows the Delaware River watershed and the various subdivisions that we have organized in our plans. In some instances we do have 2 or 3 small streams in one of these divisions. We have divided it into 12 districts and we have 2 directors from each district on our board of directors and 2 directors at large, so that each area will be properly represented on our board of directors. Within this area we do have two of the streams that are in the bill for appropriation, namely, Bill's Creek and Little Delaware. Bill's Creek is a little tributary of the Elk, south of Holton, and then the Little Delaware, north of Horton. They are two that are in for appropriations.

We have also a list of the various streams: Wild Horse Creek, Rock Creek, Big Slough Creek, Little Slough and Brush Creeks, Coal and Walnut Creeks, Cedar Creek, Elk Creek, Straight Creek, Grasshopper Creek, Little Delaware, Muddy Creek, and Craig, Plum, and Delaware Creeks.

The plan is to aid in the use of all land for which it is best suited, reseeding certain areas to grass, contour strip farming, terraces, and

seeding waterways, and gully control. These measures retard water runoff so that more moisture infiltrates into the soil, recharging ground water, reactivating springs, and providing moisture for increased crop production during dry seasons.

Experience shows that these measures will retain as much as 3½ inches of rainfall which otherwise would contribute to damaging floods. The corporation is not organized for profit and the objectives are as follows: To promote a maximum program of on-the-land water and soil conservation integrated and coordinated with proper water runoff retarding and retention structures, and other flood and erosion control measures necessary for the full and proper development, conservation and protection of the natural, agricultural, industrial and recreational resources of the Delaware River watershed in the State of Kansas; to cooperate with other associations for the purpose of unifying and coordinating the work of other associations and to cooperate with municipal, county, State and Federal agencies for the prompt, efficient, and economical organization and development of watershed projects and the enactment of enabling legislation; and to conduct an educational program in behalf of such watershed development.

Our organization has a State charter. This is a copy of our State charter and those receiving the charter and the purposes of the organization, bearing the State seal and the signers as the incorporators. So that you might be more familiar with the project of the Perry Reservoir, I have a photostatic copy of the reservoir area located in the south part of Jefferson County, which we would be glad to submit.

I also wish to file a statement by the secretary of the Delaware River Drainage Board, Mr. C. H. Thompson, secretary of that board. I will not read his statement.

(The document referred to above is as follows:)

ARTICLES OF INCORPORATION OF THE DELAWARE RIVER WATERSHED ASSOCIATION

Know All Men By These Presents: That whereas for more than 3 years the farmers in the lower Delaware River have been associated together for the purpose of controlling recurring floods in the Delaware River watershed and for giving impetus to the solving of the problems of land and water utilization, conservation, protection, and recreational development in the entire watershed and whereas a permanent organization within the watershed seems desirable:

Now, Therefore, the undersigned hereby associate themselves together to form a corporation under the laws of the State of Kansas, as follows:

ARTICLE I

The name of this corporation shall be: THE DELAWARE RIVER WATERSHED ASSOCIATION.

ARTICLE II

The principal office of the Association shall be located in _____, Kansas. The resident agent of the corporation shall be _____.

ARTICLE III

This corporation is organized NOT for profit and the objects and purposes to be transacted and carried on are as follows:

To promote a maximum program of on-the-land water and soil conservation integrated and coordinated with proper water runoff retarding and retention structures, and other flood and erosion control measures necessary for the full and proper development, conservation and protection of the natural,

agricultural, industrial, and recreational resources of the Delaware River watershed in the State of Kansas; to cooperate with other associations for the purpose of unifying and coordinating the work of other associations and to cooperate with municipal, county, State and Federal agencies for the prompt, efficient, and economical organization and development of watershed projects and the enactment of enabling legislation; and to conduct an educational program in behalf of such watershed development.

ARTICLE IV

The names and places of residence of each of the incorporators are as follows:

Name *Address*

ARTICLE V

This corporation shall be for 99 years.

ARTICLE VI

The private property of the members shall never be subject to the payment of corporate debts to any extent whatsoever.

ARTICLE VII

This corporation is not organized for profit. No portion of the net income of the corporation shall accrue to the benefit of any of its members. The corporation shall not have capital stock.

ARTICLE VIII

Any person resident or landowner within the watershed and approved by the Board of Directors may become a member of the Association upon payment of the membership fee provided for in the By-Laws. The Board of Directors may provide in the By-Laws for sustaining members on such basis as the Board of Directors determines.

ARTICLE IX

The affairs of the Association shall be managed by a Board of Directors consisting of thirty members, twenty-four of whom shall be elected by the members.

SECTION (a). Recognition in the selection of the elected members of the Board of Directors shall be given to geographic residence within the watershed so that all interests in the watershed shall be represented. Two elected Directors shall be from each of the following areas:

1. Wild Horse Creek
2. Rock Creek
3. Big Slough Creek
4. Little Slough and Brush Creeks
5. Coal and Walnut Creeks
6. Cedar Creek
7. Elk Creek
8. Straight Creek
9. Grasshopper Creek
10. Little Delaware
11. Muddy Creek
12. Craig, Pium, and Delaware Creeks

Six Directors shall be selected by the Elected Board of Directors from the sustaining members, two of whom shall be selected each year for a three year term.

SECTION (b). The originally elected Board of Directors shall consist of the following named persons from the areas set out opposite their names, who shall serve for the term as indicated:

Term expiring 1952: .....
Term expiring 1953: .....
Term expiring 1954: .....

SECTION (c). On the expiration of the terms of the Directors as set forth in subparagraph (b) above, Directors will be elected to fill the vacancies thereby created. Said Directors are to be elected for a term of three years, from and by the members.

SECTION (d). The Board of Directors shall have the power to fill vacancies among its members. The Board of Directors may remove members thereof and declare a vacancy therein for their removal from the watershed or for other good causes.

SECTION (e). The Board of Directors shall have the power to amend, adopt and repeal By-Laws except as otherwise provided by the By-Laws adopted by the members.

ARTICLE X

The Association reserves the right to amend, alter, change or repeal any or all of the provisions contained in these Articles of Incorporation by a two-thirds vote of the members present and voting.

In Witness Whereof we, the undersigned, being each of the incorporators hereinbefore named, for the purpose of forming a nonprofit corporation pursuant to the laws of the State of Kansas, sign and acknowledge these Articles of Incorporation this _____ day of _____, 1952.

BY-LAWS OF THE DELAWARE RIVER WATERSHED ASSOCIATION

ARTICLE I. MEETINGS OF MEMBERS

SECTION 1. *Annual meetings.*—The annual meeting of the members of this association shall be held on the _____ day of _____ in each year if not a legal holiday, or if a legal holiday then on the next succeeding day not a legal holiday.

SECTION 2. *Special meetings.*—Special meetings may be called by the president or the board of directors.

SECTION 3. *Notice of meetings.*—Written or printed notice of annual and special meetings shall be mailed to each member entitled to vote at such meetings at his address as shown on the records of the Association at least ten days and not more than fifty days prior to the date of any such meeting.. All such meetings shall be held within the watershed of the Delaware River in the State of Kansas. Members entitled to such notice shall be those enrolled on the date of mailing said notice.

SECTION 4. *Quorum.*—At any meeting of the members, _____ members shall constitute a quorum, for the transaction of any business which may properly come before said meeting.

SECTION 5. *Voting.*

(a) Each member shall be entitled to one vote in person or by proxy on each proposition submitted to the members at any annual or special meeting thereof.

(b) All matters properly presented to such annual or special meeting shall be decided by a majority vote of the members entitled to vote, present in person, or by proxy, provided however, that the Articles of Incorporation may be amended only by a two-thirds vote of the members entitled to vote and present in person, or by proxy, as provided in Article _____ of the Articles of Incorporation and further provided that other and different requirements as to voting in specific instances may be included in the by-laws.

ARTICLE II. BOARD OF DIRECTORS

SECTION 1. *General powers.*—The business of the corporation shall be manage by the Board of Directors as provided by the Articles of Incorporation.

SECTION 2. *Number.*—The Board of Directors shall consist of 30 members, 24 of which shall be elected as provided by the Articles of Incorporation.

SECTION 3. *Election.*—In conformity with the provisions of the Articles of Incorporation, eight directors shall be elected at each annual meeting of the members.

In all elections for directors, each member shall have the right to vote in person or by proxy and may cast one vote, for one candidate, for each of the eight vacancies to be filled each year.

Election of directors need not be by ballot.

SECTION 4. *Term of Office.*—As provided by the Articles of Incorporation the directors shall hold office for a term of three years or until their successors are respectively elected to qualify.

SECTION 5. *Qualifications.*—Directors must be members of the Association and must be selected in accordance with the provisions of the Articles of Incorporation.

SECTION 6. *Removals and Resignations.*—The Board of Directors may remove members of the board of directors and declare a vacancy in the membership of said board for nonattendance by the removed directors at Directors' meetings for a period of six months, removal from the watershed, or for other good cause.

The members at any annual meeting of the membership may remove directors from the board of directors and declare a vacancy in such board for the same reasons stated in the paragraph above.

The Board of Directors shall have authority to accept the resignation of any member of the board.

SECTION 7. *Vacancies.*—Any vacancy occurring in the office of director may be filled by the Board of Directors, provided however, that a vacancy created by removal of a director by vote of the members at any annual meeting shall be filled by the membership at the annual meeting which created the vacancy.

ARTICLE III. MEETINGS OF THE BOARD OF DIRECTORS

SECTION 1. *Regular Meetings.*—Regular meetings of the Board of Directors may be held without call, or formal notice, at such places within the watershed, and at such times as the Board may by vote from time to time determine. A regular meeting of the Board of Directors may be held without call or formal notice immediately after and at the same place as the annual meeting of the members, or any special meeting of the members.

SECTION 2. *Special Meetings.*—Special meetings of the Board of Directors may be held at any place within the watershed at any time when called by the president, or any eight (8) or more directors; reasonable notice of the time and place thereof being given to each director. A waiver of such notice in writing signed by the person, or persons, entitled to said notice, either before, or after the time stated therein, shall be deemed equivalent to such notice. Notice of any adjourned meeting of the Board of Directors need not be given.

SECTION 3. *Quorum.*—The presence at any meeting of a majority of directors, small be necessary and sufficient to constitute a quorum for the transaction of business, and except as otherwise required by statute, or by the Articles of Incorporation, the act of a majority of the directors present at a meeting, in which a quorum is present, shall be the act of the Board of Directors. In the absence of a quorum a majority of the directors present at the time and place of any meeting may adjourn such meeting from time to time until a quorum be present.

ARTICLE IV. COMMITTEES OF BOARD OF DIRECTORS

The Board of Directors may, by resolution, or resolutions, passed by a majority of the whole Board, designate one or more committees, each committee to consist of two or more directors of the Association, which, to the extent provided in such resolution, or resolutions, shall have, and may exercise, the powers of the Board of Directors, the management of the business and affairs of the Association, and may, if authorized, have power to authorize the seal of the corporation to be affixed to all papers which may require it. Such committee, or committees, shall have such name, or names, as may be determined from time to time by resolution adopted by the Board of Directors.

A nominating committee shall be appointed annually by the president with the approval of the Board of Directors to make nominations for vacancies occurring on the Board of Directors and to make nominations for Directors whose terms expire as provided by the Articles of Incorporation.

The committees of the Board of Directors shall keep regular minutes of their proceedings and report the same to the Board of Directors when required.

ARTICLE V. MEMBERSHIP

SECTION 1. The Association shall have two classes of members, to-wit: Active Members and Sustaining Members.

SECTION 2. Any person, resident with the watershed, and approved by the Board of Directors, may become an active member of the Association upon the payment of the membership fee provided for in the By-Laws. The approval of the Board of Directors will be given subject to the following requirements:

(a) Applicants for active membership must furnish the Board with their name, their mailing address, and a sufficient description of their place of residence to enable the Board of Directors to determine that such applicant actually resides within the watershed.

(b) Each application must be accompanied by the payment of the membership fee then required. The membership fee from date of incorporation of the corporation to January 1, 1953 shall be _____ for active members. Thereafter, membership fee shall be paid on a calendar year basis, the fee being _____ per year. The Board of Directors may provide for the pro-rate remission of membership fees paid during the calendar year.

(c) The Board of Directors may act to approve, or disapprove, any application for active membership at the next regular or special meeting of the Board, following

the receipt of such application, provided, however, that no application for membership may be approved or disapproved during a period commencing 60 days before the date set for any annual meeting and ending upon adjournment of said annual meeting.

SECTION 3. Sustaining members shall be any person, firm or corporation who adheres to the purposes of the Association and desires to further financially the work of the Association. The annual fee to be paid by such sustaining members shall be determined annually by the Board of Directors. A sustaining member shall have the right to vote if such member is eligible to be an active member under Section 2 hereof, and if his application has been approved as provided in Section 2 hereof.

ARTICLE VI. OFFICERS

SECTION 1. *Number.*—The corporation shall have a chairman of the Board of Directors, vice-chairman, a secretary and a treasurer. No one person may hold any two offices.

SECTION 2. *Elections.*—The officers shall be chosen by the Board of Directors, and may be removed by the Board of Directors, at any time. The officers shall be chosen from among the members of the Board of Directors.

Officers shall serve until their successors are chosen and qualify. Failure to fill any vacancy or vacancies, among the officers, shall not dissolve the corporation.

ARTICLE VII. DUTIES

SECTION 1. *Board of Directors.*—The duties of the Board of Directors are as follows:

(a) To conduct, and supervise, the affairs of the Association, including the designation of committees to examine specific problems and report their finding to the Board.

(b) Take charge of the property of the Association, except such personal property as the officers may need in order to carry out the duties of their respective offices.

(c) To determine policies for the Association, consistent with the objectives and purposes of the corporation as herein set out in the Articles of Incorporation. To provide for annual and special meetings of the Association.

(d) To initiate, supervise and approve plans and programs designed to achieve the objectives and purposes of the Association.

(e) To supervise the keeping of systematic records of the finances, property, and the progress of the plans and programs of the Association, and of the proceedings of the Association.

(f) To provide for the dissemination of information to the members and, to the public generally as may be needed to provide suitable publicity for the work and status of the Association.

(g) To arrange for the periodic audit of the financial affairs of the Association by a Certified Public Accountant.

SECTION 2. *Chairman.*—The chairman shall preside over the meetings of the Board, and of the corporation, and shall perform all acts needed in the execution of policies of the Board, except as otherwise provided for by the Board. The chairman shall be the chief executive officer of the corporation and subject to the direction, and under the supervision of the Board of Directors, and shall have general charge of the business, the affairs and property of the corporation, and control over its officers, agents and employees. He shall perform such other duties, and exercise such other powers as may, from time to time, be assigned to him by these By-Laws or by the Board of Directors.

SECTION 3. *Vice-Chairman.*—At the request of the chairman, or in the event of his absence or disability, the vice-chairman, shall perform all the duties of the chairman, and when so acting, shall have all the powers of, and be subject to, all the restrictions upon the chairman. He shall perform such other duties and exercise such other powers as from time to time may be assigned to him by the Board of Directors or by the chairman.

SECTION 4. *Secretary.*—The secretary shall:

(a) Record all the proceedings of the meetings of the corporation and directors in a book to be kept for that purpose.

(b) Prepare and present for the consideration of the Board of Directors, programs and plans as directed, or upon his own initiative.

(c) Provide for the maintenance of records of the property of the Association; catalogue and provide for the safe keeping of all maps, charts, documents, and other sources of information which are the property of, or in the possession of,

the corporation. Provide for the preparation and mailing to members of notice of all annual and special meetings of the members as required by the Articles of Incorporation and the By-Laws.

(d) Supervise the keeping of the rolls of the Association and provide for the inclusion in said rolls of all members of the Association and produce said rolls for the inspection of any member who may be present at each annual and special meeting of the Association.

(e) Be custodian of the records of the corporation and the Board of Directors and the seal of the corporation.

(f) See that all books, reports, statements, certificates, and other documents and instruments required by law to be kept or filed, are properly kept or filed.

(g) In general, perform all duties and have all powers incident to the office of secretary and perform such other duties and have such other powers as from time to time may be assigned to him by these By-Laws or by the Board of Directors or the Chairman.

SECTION 5. *Treasurer.*—The treasurer shall:

(a) Have supervision over the funds, securities, receipts, and disbursements of the corporation.

(b) Cause all monies and other valuable effects of the corporation to be deposited in its name and to its credit in such depositories as shall be selected by the Board of Directors.

(c) Cause the funds of the corporation to be disbursed by checks or drafts upon the authorized depositories of the corporation, when such disbursements shall have been duly authorized.

(d) Cause to be taken and preserved proper vouchers for all monies and disbursements.

(e) Cause to be kept, correct books of account of all the business transactions of the corporation.

(f) Render to the president or the Board of Directors, whenever requested, an account of the financial condition of the corporation, and of his transactions as treasurer.

(g) Be empowered to require from the officers or agents of the corporation, reports or statements giving such information as he may desire with respect to any and all financial transactions of the corporation.

(h) In general, perform all duties and have all powers incident to the office of treasurer and perform such other duties and have such other powers as from time to time may be assigned to him by these By-Laws or by the Board of Directors or the Chairman.

ARTICLE VIII. COMPENSATION TO OFFICERS AND DIRECTORS

No officer or director of the Association shall be entitled to any compensation for or in consideration of the execution of his duties as such director, or officer provided however, that the actual, reasonable expenses of officers or directors incurred on the business of the Association may, with the approval of the Board of Directors, be paid to them.

ARTICLE IX. POWER TO ACCEPT DONATIONS

The Board of Directors shall have the power and authority to accept donations made to the Association for the furtherance of its objects and purposes, provided, however, that the Board of Directors may reject any donation made upon a condition or restriction if in the discretion of the Board of Directors the acceptance of the donation as so conditioned or restricted will not be in the best interests of the Association.

ARTICLE X. SEAL

Corporation shall have a seal which shall be in the form of a circle and shall bear the name of the Association and the year of its incorporation, and shall indicate its formation under the laws of the State of Kansas. Such seal may be used by causing it, or a facsimile thereof, to be impressed or affixed or reproduced or otherwise.

ARTICLE XI. FISCAL YEAR

Except as from time to time otherwise provided by the Board of Directors, the fiscal year of the corporation shall be the calendar year.

ARTICLE XII. AMENDMENTS

These By-Laws may be altered or repealed or new By-Laws may be adopted at any meeting of the Board of Directors or at any annual meeting of the members.

The Delaware River Watershed Association

I. THE WATERSHED

The Delaware River watershed comprises 1,144 square miles in northeast Kansas, including parts of Jefferson, Jackson, Atchison, Brown, and Nemaha Counties. It is that area drained by the Delaware River and its tributaries.

II. THE ORGANIZATION

It is proposed to Organize a Delaware River Watershed Association as a nonprofit, nonpartisan corporation for the purpose of bringing to all of the land and all of the people in the area, the protection and other benefits of a complete program of soil and water conservation, erosion control, flood abatement, and recreational and wildlife development.

As a means of securing a well-balanced local representation, it is proposed that the watershed be subdivided into 12 districts, each one in turn comprising a subwatershed of the area as follows:

1. Wild Horse Creek
2. Rock Creek
3. Big Slough Creek
4. Little Slough and Brush Creeks
5. Coal and Walnut Creeks
6. Cedar Creek
7. Elk Creek
8. Straight Creek
9. Grasshopper Creek
10. Little Delaware
11. Muddy Creek
12. Craig, Plum, and Delaware Creeks

III. THE PLAN

1. The heart of any conservation plan begins with proper care and use of the land. These practices originate on each individual farm, are within the jurisdiction of the landholder, and pay handsome dividends to the landowner for those measures adopted, such as:

(*a*) Use of all land for purposes to which it is best suited.
(*b*) Reseeding of certain areas to grass.
(*c*) Contour or strip farming.
(*d*) Terracing and seeded waterways.
(*e*) Gully control.

These measures retard water runoff so that more moisture infiltrates into the soil, recharging ground water, reactivating springs, and providing moisture for increased crop production during dry seasons. Experience shows that these measures will retain as much as 3½ inches of rainfall which otherwise would contribute to damaging floods.

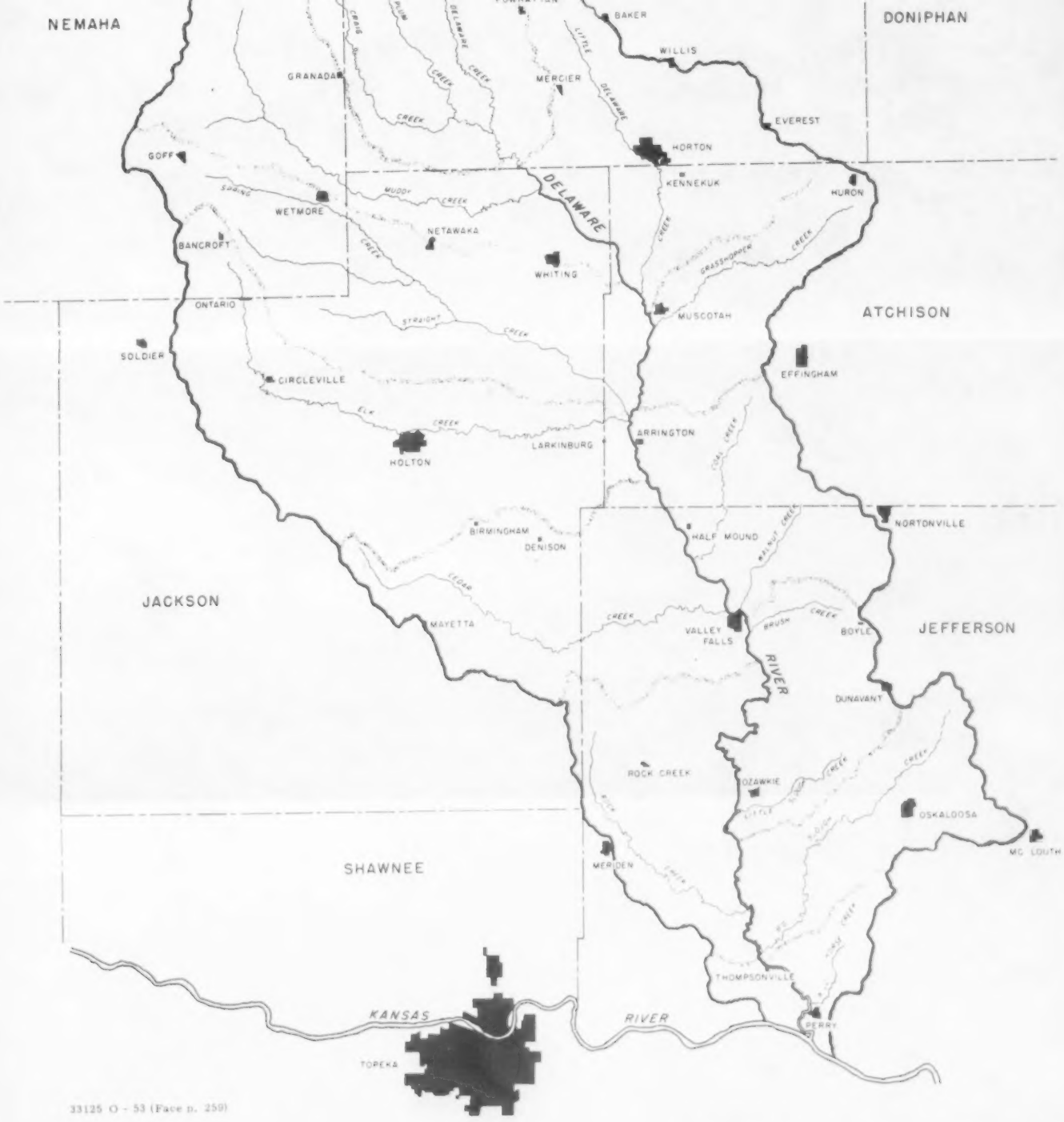
2. Flood abatement begins with the above described measures. In addition, however, it is necessary to provide a series of detention reservoirs to temporarily hold the excess water runoff resulting from extra heavy and prolonged rains. Such detention reservoirs are so designed that the water is discharged at a rate which the stream channel below can carry without flooding. This is accomplished without retaining the water so long as to damage pasture grasses growing within the reservoir area. Such flood storage can also be combined with permanent pools which will supply water for home, livestock, irrigation, or recreation as may be desired by the local landowner. Best of all, experience shows that a series of such detention reservoirs can be constructed at a cost per acre reservoired, or per acre-foot of flood storage, which is from 50 to 60 percent of the cost of larger flood control structures.

Finally, the detention reservoirs, by protecting the small creek valleys from flooding, actually increase the agricultural production of the area whereas, a large reservoir inundates a large area of our best soil.

3. Recreational and Wildlife Development, made possible by the foregoing practices and structures, will provide fishing, boating, hunting, picnicking and other outdoor facilities. Year around running streams and springs, in addition to ponds and lakes, will provide healthful, wholesome recreation which does not exist to a measured degree at present.

IV. THE METHOD

The Delaware River Watershed Association, will provide the organization through which the people in the area can carry out the above objectives in accordance with their own needs and desires. It is proposed that the Association will



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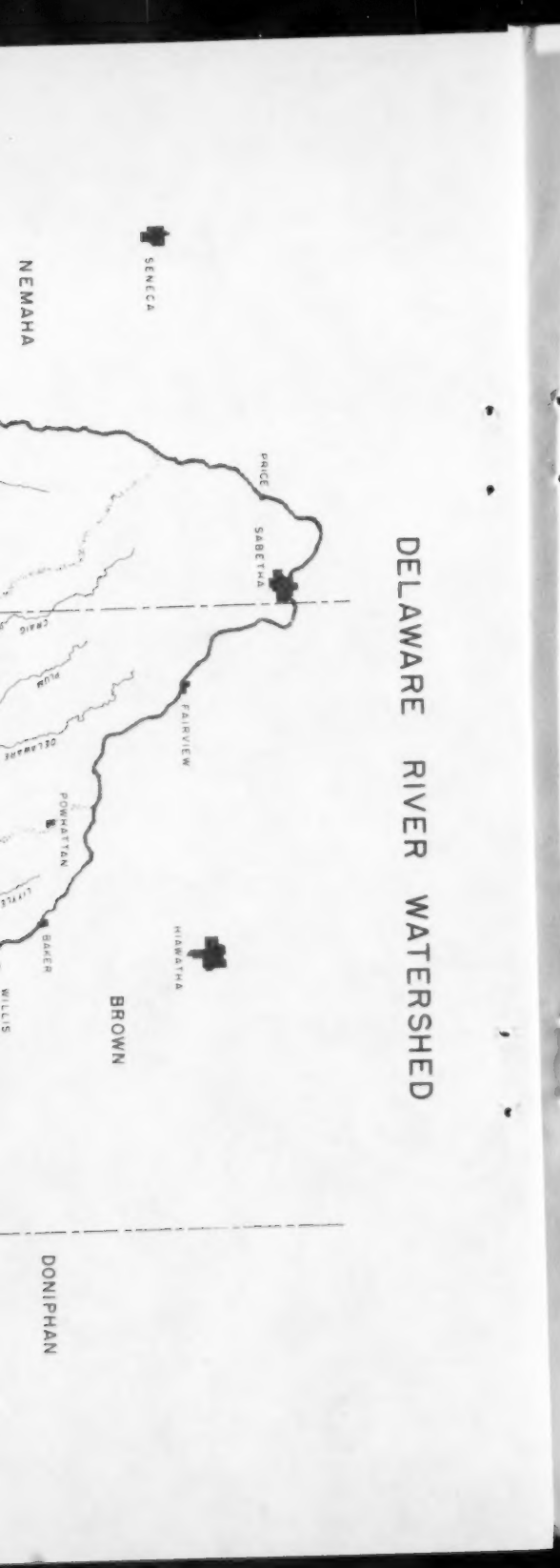

bring to the accomplishment of the desired objectives, all of the local, State and Federal agencies that have something to contribute to the success of the plan, such as—

County soil conservation districts
County farm extension agents
Local business and industrial firms
Kansas State Board of Agriculture—Division of Water Resources
Kansas State College—extension service
Kansas Highway Commission
Kansas State Board of Health
Kansas Forestry, Fish and Game Commission
United States Department of Agriculture
S. C. S.; P. M. A.; Forestry Service, etc.
United States Army engineers

V. ACTION

This is our valley. These are our problems. By working together we can develop a river plan that works, a plan under which land and people prosper. Let's do it.

C. H. THOMPSON & SONS,
Ozawkie, Kans., May 10, 1953.

To Representative Clifford Hope and His House Agricultural Committee on Soil and Water Conservation:

Just a word on floods out of the past. I met with the late Senator Charles Curtis in Topeka in the late twenties on the Calvin Coolidge River and Harbor bill and asked for some help on the Kansas Delaware River and this is what the Senator told me at that time. Quote "Thompson the Army engineers want to solve Kansas floods with one dam" unquote. And about 3 years later the Kiro Dam proposition came up. They were talked out of that dam, that it would not be feasible.

With proper education I think we can talk them out of some more big dams.

As Secretary of the Delaware (Kansas) drainage district I make a strong plea for the passage of Clifford Hope's watershed bill. Also I am with my Representative Howard Miller of First District 100 percent on upper watershed treatment. We must have this to save our soil for future use.

Much credit should be given Governor Arn of Kansas for the findings of the three-man commission appointed by him. This was one big step for a beginning in the right direction.

I sincerely hope that our Congress will see that our land needs the help of our Federal Government. And this help will go a long way in preventing floods on all small streams like Bill Creek and Little Delaware.

Yours truly,

C. H. THOMPSON.

Mr. BREY. Gentlemen, we have studied closely the provisions of H. R. 4877 and it is our earnest hope that this or some similar legislation will be adopted whereby the agricultural people may be induced to better care for their land and natural water resources. We feel that such a program will relieve the necessity of certain destructive programs. We feel that there will be little land and no homes destroyed by such a program; our soil will be retained; our water likewise will be retained for the purpose of raising the water table.

We feel that it will prevent floods, the reoccurrence of floods, and in the event that it should become necessary to have larger structures on the lower tributaries, such a program will prevent their siltation.

In view of this we especially solicit consideration by the United States Congress in the appropriation for funds to carry out such a program as it is not entirely the responsibility of the property owners for such a program, inasmuch as it contributes to the general welfare of our community, our State, and our Nation. I thank you.

The CHAIRMAN. Are there any questions? Mr. McMillan?

Mr. MCMILLAN. Could you tell me if this proposal of the Administration to reduce the appropriation for reclamation will have any effect on this proposed program of yours?

Mr. BREY. I would not think so.

Mr. MCMILLAN. I wondered if it would be connected up with that or not?

The CHAIRMAN. Mr. Andresen?

Mr. ANDRESEN. I notice you mention that you have formed a corporation. Is that a type of corporation that is recognized by the laws of your State?

Mr. BREY. I am glad you asked that question. At our recent session of the State Legislature of Kansas we were influential in the adoption of a watershed enabling act and this organization that we have is now in the process of being the stepfather of an organization created by the statutes of the recent session of the Kansas Legislature which enables them to act as a drainage organization, to levy taxes, and to proceed with construction of projects in the watershed area.

Mr. ANDRESEN. That is somewhat similar to what we have in Minnesota, but we call it a conservancy that is established by the courts, by a certain number of people going to the court and making a showing. Taxes can be levied to carry out the work of the group within the conservancy. So you apparently have about the same thing.

Mr. BREY. If you will notice in our statement, in declarations of purpose, we said to work for such legislation which will enable this program to go forth. We did work for that legislation, and secured the passage or were helpful in securing the passage of a State law about March of this year, which will become effective July 2. We have had meetings and are preparing our petition and it will be circulated in the areas as prescribed by the law, and we will have to receive the signature of 20 percent of the people and 25 percent of the acreage within the watershed before we can call an election.

Then it will be submitted to our State water resources board and upon their approval we can call an election within this district for the creation of a taxing unit.

Mr. ANDRESEN. I am sorry I did not hear your statement. I was unavoidably detained. I will read your statement in the record. What is the percentage of cooperation in this area where you have your corporation?

Mr. BREY. Sir, my associate witness has the records from our soil conservation districts from my five counties, and that is his part of our testimony. Mr. Lueck will give you that.

Mr. ANDRESEN. Your first problem will come when you begin levying taxes. There is a reluctance, of course, to pay more taxes than we are paying now, both locally and State and nationally. I am watching the newly created conservancy in my district with a great deal of interest. People are for it but a good many people would like to have the Government pay for it.

Mr. BREY. We fully realize that we have a little hill ahead of us. I believe that the people—pardon my expression—I believe the people back in Kansas have realized the point that when they send a dollar to Washington, it has a tendency to shrink before it gets back, down to about possibly 10 cents on the dollar. I believe that the time

will come when we will cease to ask Washington for all of our benefits. I hope so.

Mr. ANDRESEN. I am glad to hear that.

The CHAIRMAN. You have set up this legislation in Kansas to enable the districts to organize in such a way that the expense of carrying out these watershed programs can be properly divided between the local governments, the State government if necessary, and the Government in Washington. Is that correct?

Mr. BREY. That is correct.

The CHAIRMAN. You feel that a responsibility devolves upon all units of government to carry out their part of this activity, that it is not something that can be borne by any one of the segments of our Government. That there is a national interest involved and there is a local interest involved, and that the problem is to get a proper apportionment as far as cost is concerned between those interests. Is that a correct interpretation?

Mr. BREY. Beyond any doubt the benefits will extend to posterity, they will extend beyond our district, and it is quite impossible to determine the actual benefits outside of the district arising from the construction within the district, and that part should be borne by society outside of the district, namely Federal contribution and possibly some State.

Mr. ANDRESEN. It may also be possible that your entire watershed project will not be completed while you men who are active today are living. It is a long-range program, as I understand it, where you are not going to do it all at one time, but you are setting up the base for the program and then proceeding slowly as funds are available to complete the project, and that may be 25 or 30 years from now before the entire project is completed.

Mr. BREY. Beyond a doubt you are correct. In other words, we appear here today in behalf of two of the small tributaries of the Delaware River watershed—Bills Creek and Little Delaware—which are named in your bill for some authorization, which have been surveyed by the soil department and are in the process of receiving some contribution from the Federal Government. Our organization desires in that manner to help each individual watershed within our district. That is our purpose.

The CHAIRMAN. You are referring now to the matter of Federal appropriations, a matter that is pending before the Appropriations Committee of the House?

Mr. BREY. That is correct. Relative to Bills Creek and Little Delaware.

The CHAIRMAN. Mr. McIntire?

Mr. MCINTIRE. I have two short questions. One is, Under your new Kansas law, does it give the watershed organization the right of eminent domain?

Mr. BREY. We do have the right of eminent domain.

Mr. MCINTIRE. That is incorporated within the law?

Mr. BREY. Incorporated within the law.

Mr. MCINTIRE. As you organize a watershed district that may perhaps cross over or cover 2 or 3 soil conservation districts, does your watershed district plan on having an engineering and technical staff, or do they rely on coordination with the technical staff provided by the SCS?

Mr. BREY. The State law provides for cooperation between the soil-conservation agencies of the existing counties and units, together with our engineers, and with engineers of those districts.

Mr. MCINTIRE. Then the board of directors of your watershed district or corporation will be a policy making board to coordinate the effort of SCS and supplement with some engineering staff perhaps in addition to SCS technicians?

Mr. BREY. Certainly. And help to promote the project so that it will be promoted by local interest rather than from the top down.

Mr. MCINTIRE. Coordinated with the Extension Service?

Mr. BREY. That is right. Would you like to have a copy of that bill submitted? We will submit it. I have it in my case here.

(The document referred to above is as follows:)

(As amended by Senate Committee)

Session of 1953

HOUSE BILL No. 481

By Committee on Flood Control and Drainage

AN ACT relating to and providing for the organization of watershed districts, prescribing the authority jurisdiction and functions of said districts for the conservation of soil and water, retardation of floods and the development of water resources of the state and of said watershed districts, granting the power o eminent domain and providing a procedure for the condemnation of property, and providing for the issuance of bonds by such districts for such projects.

Be it enacted by the Legislature of the State of Kansas:

ARTICLE 1.—FORMATION OF WATERSHED DISTRICTS

SECTION 1. This act shall be known as the watershed district act.

SEC. 2. The following terms when used in this act shall be construed to have the meaning ascribed to them in this section: (*a*) "Person" shall mean any person, firm, partnership, association or corporation; (*b*) "publication" shall mean the publication in a newspaper or newspapers admitted to the United States mail as second-class matter, of general circulation within the watershed district; (*c*) "land" shall mean real property as that term is defined by the laws of the state of Kansas; (*d*) "elector" shall mean any qualified elector under the constitution and general election laws of the state of Kansas, residing within the watershed district; (*e*) "chief engineer" shall mean the chief engineer of the division of water resources of the Kansas state board of agriculture; (*f*) "board" shall mean the board of directors of a watershed district; (*g*) "district" shall mean a watershed district for which organization is proposed or which has been organized under the provisions of this act.

SEC. 3. Before any watershed district shall be organized, a petition shall be filed in the office of the secretary of state, signed by not less than twenty percent (20%) of the landowners of the real property *and representing twenty-five percent (25%) of the acreage* within said proposed district as shown by a verified enumeration of said landowners taken by a landowner of said proposed district to be selected by the first ten signers of the petition. Said enumeration shall be separated as to counties, and a verified copy of said enumeration shall be filed with the county clerk of each county in which any portion of said proposed district is located, and each said county clerk shall thereupon certify to the secretary of state the number of landowners within said proposed district, and the number of signers on said petitions. The county clerk shall ascertain the number of landowners by the record in the office of the register of deeds of his respective county at the time of the filing of said enumeration.

SEC. 4. Said petition shall set forth: (1) The proposed name of the district, which name shall end with the words "Watershed District Number ——": *Provided*, That if the district is located in two or more counties the name of the district shall end with the words "Watershed Joint District No. ——". It shall be the duty of the secretary of state to assign a number to each such district in the order in which petitions for their organization are received in his office.

(2) A description of the boundaries of the area to be included in the district, together with a list of the lands included within the proposed boundaries of the

district, identified by section numbers and fractions thereof, and other platted areas as appropriate.

(3) A statement of the purposes for which the district is to be organized.

(4) A statement of the number of persons that will constitute the board of directors of the district, which shall be an uneven number divisible by three (3), of not less than three (3) and not more than thirty-three (33), together with the names and addresses of the persons who will constitute the original board of directors with the term of office of each set forth beside his name.

(5) Any other matter deemed essential.

(6) A prayer for the organization of the district as a nonprofit corporation.

A map showing the boundaries of the district shall be attached to the petition as an exhibit and incorporated therein by reference. The petition shall be in substantially the following form.

BEFORE THE SECRETARY OF STATE OF THE STATE OF KANSAS

In the Matter of ---------- Watershed (Joint) District Number ----, ---------- and ---------- Counties, Kansas.

PETITION

Come now the undersigned persons and state that they are landowners residing within the proposed boundaries of the aforenamed watershed district, hereinafter more fully described, and that each signer states that his respective post office address is set forth beside his name.

That the purposes for which this district is organized are (state purposes).

That a board of directors for the management and operation of the district is hereby fixed and constituted with ---- members; that the names of the persons who will serve on the original board of directors, of which the first named shall be acting chairman, and their respective addresses and terms of office are as follows:

(List names and addresses and terms of office.)

That attached hereto, marked "Exhibit A" and made a part hereof as fully as if set forth herein, is a map showing the proposed boundaries of the district.

That the proposed boundaries of said district are described as follows:

(Description of proposed boundaries.)

That the proposed boundaries of said district do not embrace the territorial limits of any city of the first or second class.

WHEREFORE, The undersigned, individually and collectively, pray that a watershed district be organized in the manner provided by law, for the purposes set forth herein, and that the secretary of state and the chief engineer of the division of water resources of the Kansas state board of agriculture proceed diligently in the performance of their duties so that the organization of this proposed district may be completed and approved at the earliest possible time.

Submitted to the secretary of state this ---- day of ----------, 19 ----.

SEC. 5. A counterpart of the petition, setting forth the text of the petition in full, shall be circulated within the proposed boundaries of the district and a duplicate original of each counterpart shall be furnished to the county clerk of each county wherein lies a part of the proposed district. All counterparts shall be filed with the secretary of state at the same time and shall be received and treated by him as a single petition. The secretary of state shall determine the sufficiency or insufficiency of the petition on the basis of the information as to the number and qualifications of signers certified to him by the county clerks of the counties affected, shall endorse his finding and the date thereof on the face of the petition, and shall notify, in writing, the respective county clerks and the person designated in the petition as the acting chairman of the board of directors of his findings.

SEC. 6. If he finds the petition to be sufficient as to form and the number and qualifications of the petitioners, he shall prepare a certified copy of the petition and transmit the same to the chief engineer within five (5) days from the date of his determination of sufficiency. Upon receipt of such certified copy the chief engineer shall institute an investigation of the proposed district, its territory and purposes, and shall within thirty (30) days after receipt of said copy transmit a written report of his findings on the petition to the secretary of state and the acting chairman of the board of directors named in the petition.

The report of the chief engineer shall include but not be limited to: (1) A finding as to whether the proposed boundaries of the district conform substantially with the boundaries of the natural watershed; (2) a finding as to whether the proposed

boundaries of the district conflict with the boundaries of any existing watershed district; (3) a finding as to whether the statement of purposes contained in the petition conform with the intents and purposes of this act and the conservation and flood control problems existing in the area proposed to be included within the boundaries of the district; (4) a finding as to whether the organization of the proposed district would promote the general welfare and be conducive to the conservation of soil or water, to the retardation of floods, or to the development of the water resources of the state. (5) Any conditions, revisions or limitations which the chief engineer deems necessary to the organization of the district and the change shall thereupon become a part of the petition and be deemed effective without a recirculation of the revised or amended petition among the electors. (6) A specific finding of approval or disapproval of the petition.

SEC. 7. Within ten (10) days after receipt of a certified copy of the chief engineer's report approving the petition, or the petition as amended, the acting chairman of the board of directors of the proposed district shall call a meeting of the board by mailing a written notice fixing the time and place of such meeting to each member of the board at least five (5) days in advance of the time so fixed, unless such notice is duly waived. The board shall meet at the time and place fixed, in said notice for the purpose of electing from their number a president, a vice-president, a secretary, and a treasurer and for the purpose of calling, by resolution, an election of the electors of the district for the purpose of submitting to the electors the question of whether the district should be organized and created in accordance with the petition or, if such be the case, the petition as amended or revised by the chief engineer: *Provided*, That in a district having only three (3) directors, the board shall elect one person to hold the offices of secretary and treasurer. The board shall designate one or more centrally located voting places within the proposed district, but if the territory of such proposed district lies in more than one county, then at least one voting place shall be designated within each county of said proposed district, and shall name and appoint three (3) judges and two (2) clerks for each voting place designated, said judges and clerks shall take an oath to faithfully perform their duties as judges and clerks respectively, and shall each receive compensation of eight dollars ($8) per day for their services, and shall order the president and the secretary to cause a notice of said special election to be published for three (3) consecutive weeks in some newspaper of general circulation within the proposed district, the first publication to be not less than twenty-one (21) days prior to such election. If the proposed district lies in more than one county, then a similar notice shall be published in a newspaper of general circulation in each of the countries in which a part of said proposed district is located. Such notice shall set forth the time and place or places of holding the election, the proposition to be voted on, shall contain a copy of the petition or the amended or revised petition (omitting the map attached thereto as an exhibit) and shall be signed by the president and attested by the secretary of the board. The vote at such election shall be by ballot, and such ballot shall comply with the usual requirements for an official ballot for public office insofar as such requirements are applicable thereto. Upon such ballot shall be printed the proposition submitted, preceded by the words "Shall the following be adopted?" and followed by the words "To vote in favor of the proposition make a cross × mark in the square after the word 'Yes'." "To vote against the proposition make a cross × mark in the square after the word 'No'." Returns from such election shall be made to the board of directors who shall canvass the votes cast at such election on the second Friday following the date of said election, and said board shall immediately certify the results of said election to the secretary of state. If a majority of the electors voting on the proposition voted in favor of the organization and creation of the district upon the petition or amended petition, the secretary of state shall thereupon issue to the board of directors a certificate of incorporation for said district, in the form of a certified copy of the petition and all endorsements and proceedings thereon and thereto relating, which shall be filed of record in the office of the register of deeds of each county in which all or a portion of the district lies. Upon such recordation of the certificate of incorporation the district shall be authorized to function in accordance with the provisions of this act and its certificate of incorporation. If a majority of the electors voting on the proposition voted against the organization and creation of the district, the secretary of state shall endorse that fact on the face of the petition and the proceedings shall be closed.

SEC. 8. If the organization of the proposed district is defeated at the special election or if the petition is disapproved by the chief engineer, the board of directors named in the petition shall continue to function in a limited capacity for the pur-

poses hereinafter set forth in this action. Said board shall determine the amount of money necessary to pay all of the costs and expenses incurred in the preparation and the filing of the petition and in the conduct of the special election and shall certify a statement of such amount to the county clerk of each county in which the proposed district was to be located. Said county clerks shall thereupon ascertain the total assessed valuation of all taxable tangible property in their respective counties within the proposed district and certify same to the county clerk of the county in which the acting chairman of the board of the proposed district resides. Said county clerk shall determine the levy necessary to be spread against the taxable tangible property in the entire proposed district in order to raise funds sufficient to pay the amount set forth in said statement and shall certify said levy to the county clerks of the other counties in which a portion of said district is located. Each of the county clerks shall then cause said levy to be extended against the taxable tangible property lying within the boundaries of said proposed district and within his county. The county treasurers of the respective counties involved shall remit the funds raised by such levy in their counties to the county treasurer of the county in which the acting chairman of the board resides who shall hold said funds and shall honor warrants drawn upon said funds by the acting chairman of the board and countersigned by the acting secretary of the board in payment of the costs and expenses incurred in the proposed organization of the district and shown on the aforementioned statement of expenses.

ARTICLE 2.—GENERAL POWERS AND DUTIES OF DISTRICT

SEC. 9. Each watershed district incorporated under the provisions of this act shall be a body politic and corporate and shall have the power:

First. To adopt a seal.

Second. To sue and be sued by its corporate name.

Third. To purchase, hold, sell and convey land and personal property and to execute such contracts as may, by its board of directors, be deemed necessary or convenient to enable it to properly carry out the purpose for which organized.

Fourth. To conserve soil and water and to retard floods and develop the water resources of the district.

Fifth. To contract for the construction of proposed works and improvements.

Sixth. To employ such professional services and other assistance as is, by its board of directors, deemed essential[.]: *Provided, That soil conservation engineering services shall be used whenever available.*

Seventh. To construct any drainage works or improvements; to construct any works or improvements for the control, retention, diversion or utilization of water; to retard runoff of water and soil erosion; to construct any ditch, channel improvement, dike or levee and to repair, improve and maintain any of said improvements or structures.

Eighth. To acquire personal property by gift or purchase.

Ninth. To acquire land by gift, purchase or eminent domain; such power of eminent domain to be exercised in like manner as provided by sections 24–438 to 24–446, both sections inclusive, of the General Statutes of 1949, or any amendments thereto, relating to the exercise of the power of eminent domain by certain drainage districts.

Tenth. To levy taxes, issue bonds and incur indebtedness within the limitations prescribed by this act.

Eleventh. To cooperate and contract with *persons, firms, associations, partnerships and private corporations, and with* other watershed districts, drainage districts, and cities of all classes of this state, and with drainage districts, watershed districts, or other public corporations organized for similar purposes in any adjoining state and with other local, state and federal governmental agencies and to enter into cooperative contracts and agreements with any such districts, corporations or agencies.

Twelfth. To extend district boundaries or merge with adjoining watershed or drainage districts, subject to approval by a majority vote of the affected electors in accordance with the procedure hereinafter provided.

Thirteenth. To select a residence or home office for the watershed district, which shall be at a place designated by the board of directors.

ARTICLE 3.—GOVERNING BODY

SEC. 10. All powers granted to watershed districts incorporated under the provisions of this act shall be exercised by a board of directors which shall be composed of any odd number divisible by three (3) and specified in the petition

boundaries of the district conflict with the boundaries of any existing watershed district; (3) a finding as to whether the statement of purposes contained in the petition conform with the intents and purposes of this act and the conservation and flood control problems existing in the area proposed to be included within the boundaries of the district; (4) a finding as to whether the organization of the proposed district would promote the general welfare and be conducive to the conservation of soil or water, to the retardation of floods, or to the development of the water resources of the state. (5) Any conditions, revisions or limitations which the chief engineer deems necessary to the organization of the district and the change shall thereupon become a part of the petition and be deemed effective without a recirculation of the revised or amended petition among the electors. (6) A specific finding of approval or disapproval of the petition.

SEC. 7. Within ten (10) days after receipt of a certified copy of the chief engineer's report approving the petition, or the petition as amended, the acting chairman of the board of directors of the proposed district shall call a meeting of the board by mailing a written notice fixing the time and place of such meeting to each member of the board at least five (5) days in advance of the time so fixed, unless such notice is duly waived. The board shall meet at the time and place fixed, in said notice for the purpose of electing from their number a president, a vice-president, a secretary, and a treasurer and for the purpose of calling, by resolution, an election of the electors of the district for the purpose of submitting to the electors the question of whether the district should be organized and created in accordance with the petition or, if such be the case, the petition as amended or revised by the chief engineer: *Provided*, That in a district having only three (3) directors, the board shall elect one person to hold the offices of secretary and treasurer. The board shall designate one or more centrally located voting places within the proposed district, but if the territory of such proposed district lies in more than one county, then at least one voting place shall be designated within each county of said proposed district, and shall name and appoint three (3) judges and two (2) clerks for each voting place designated, said judges and clerks shall take an oath to faithfully perform their duties as judges and clerks respectively, and shall each receive compensation of eight dollars ($8) per day for their services, and shall order the president and the secretary to cause a notice of said special election to be published for three (3) consecutive weeks in some newspaper of general circulation within the proposed district, the first publication to be not less than twenty-one (21) days prior to such election. If the proposed district lies in more than one county, then a similar notice shall be published in a newspaper of general circulation in each of the countries in which a part of said proposed district is located. Such notice shall set forth the time and place or places of holding the election, the proposition to be voted on, shall contain a copy of the petition or the amended or revised petition (omitting the map attached thereto as an exhibit) and shall be signed by the president and attested by the secretary of the board. The vote at such election shall be by ballot, and such ballot shall comply with the usual requirements for an official ballot for public office insofar as such requirements are applicable thereto. Upon such ballot shall be printed the proposition submitted, preceded by the words "Shall the following be adopted?" and followed by the words "To vote in favor of the proposition make a cross × mark in the square after the word 'Yes'." "To vote against the proposition make a cross × mark in the square after the word 'No'." Returns from such election shall be made to the board of directors who shall canvass the votes cast at such election on the second Friday following the date of said election, and said board shall immediately certify the results of said election to the secretary of state. If a majority of the electors voting on the proposition voted in favor of the organization and creation of the district upon the petition or amended petition, the secretary of state shall thereupon issue to the board of directors a certificate of incorporation for said district, in the form of a certified copy of the petition and all endorsements and proceedings thereon and thereto relating, which shall be filed of record in the office of the register of deeds of each county in which all or a portion of the district lies. Upon such recordation of the certificate of incorporation the district shall be authorized to function in accordance with the provisions of this act and its certificate of incorporation. If a majority of the electors voting on the proposition voted against the organization and creation of the district, the secretary of state shall endorse that fact on the face of the petition and the proceedings shall be closed.

SEC. 8. If the organization of the proposed district is defeated at the special election or if the petition is disapproved by the chief engineer, the board of directors named in the petition shall continue to function in a limited capacity for the pur-

poses hereinafter set forth in this action. Said board shall determine the amount of money necessary to pay all of the costs and expenses incurred in the preparation and the filing of the petition and in the conduct of the special election and shall certify a statement of such amount to the county clerk of each county in which the proposed district was to be located. Said county clerks shall thereupon ascertain the total assessed valuation of all taxable tangible property in their respective counties within the proposed district and certify same to the county clerk of the county in which the acting chairman of the board of the proposed district resides. Said county clerk shall determine the levy necessary to be spread against the taxable tangible property in the entire proposed district in order to raise funds sufficient to pay the amount set forth in said statement and shall certify said levy to the county clerks of the other counties in which a portion of said district is located. Each of the county clerks shall then cause said levy to be extended against the taxable tangible property lying within the boundaries of said proposed district and within his county. The county treasurers of the respective counties involved shall remit the funds raised by such levy in their counties to the county treasurer of the county in which the acting chairman of the board resides who shall hold said funds and shall honor warrants drawn upon said funds by the acting chairman of the board and countersigned by the acting secretary of the board in payment of the costs and expenses incurred in the proposed organization of the district and shown on the aforementioned statement of expenses.

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Second. To sue and be sued by its corporate name.

Third. To purchase, hold, sell and convey land and personal property and to execute such contracts as may, by its board of directors, be deemed necessary or convenient to enable it to properly carry out the purpose for which organized.

Fourth. To conserve soil and water and to retard floods and develop the water resources of the district.

Fifth. To contract for the construction of proposed works and improvements.

Sixth. To employ such professional services and other assistance as is, by its board of directors, deemed essential[,]: *Provided, That soil conservation engineering services shall be used whenever available.*

Seventh. To construct any drainage works or improvements; to construct any works or improvements for the control, retention, diversion or utilization of water; to retard runoff of water and soil erosion; to construct any ditch, channel improvement, dike or levee and to repair, improve and maintain any of said improvements or structures.

Eighth. To acquire personal property by gift or purchase.

Ninth. To acquire land by gift, purchase or eminent domain; such power of eminent domain to be exercised in like manner as provided by sections 24–438 to 24–446, both sections inclusive, of the General Statutes of 1949, or any amendments thereto, relating to the exercise of the power of eminent domain by certain drainage districts.

Tenth. To levy taxes, issue bonds and incur indebtedness within the limitations prescribed by this act.

Eleventh. To cooperate and contract with *persons, firms, associations, partnerships and private corporations, and with* other watershed districts, drainage districts, and cities of all classes of this state, and with drainage districts, watershed districts, or other public corporations organized for similar purposes in any adjoining state and with other local, state and federal governmental agencies and to enter into cooperative contracts and agreements with any such districts, corporations or agencies.

Twelfth. To extend district boundaries or merge with adjoining watershed or drainage districts, subject to approval by a majority vote of the affected electors in accordance with the procedure hereinafter provided.

Thirteenth. To select a residence or home office for the watershed district, which shall be at a place designated by the board of directors.

ARTICLE 3.—GOVERNING BODY

SEC. 10. All powers granted to watershed districts incorporated under the provisions of this act shall be exercised by a board of directors which shall be composed of any odd number divisible by three (3) and specified in the petition

for creation of the district, of qualified electors of the district: *Provided*, That said board shall be composed of not less than three (3) and not more than thirty-three (33) electors. Each director shall serve for a term of three (3) years, and until his successor is duly elected and qualified, except that one-third of the original directors designated in the petition for organization of the district shall serve for a term of one (1) year, one-third for a term of two (2) years, one-third for a term of three (3) years, from the date the certificate of incorporation is filed of record in the office of the register of deeds of each county in which territory of the district is located. Such directors shall serve without compensation[-], *but shall be allowed actual and necessary expenses incurred in the performance of their official duties.*

SEC. 11. Within thirty (30) days after the certificates of incorporation have been duly filed, and annually thereafter, an election shall be held for the election of directors whose terms expire. Notice of said election shall be given at least ten (10) days prior to the date thereof by one publication in a newspaper of general circulation in each of the counties of which said watershed district is a part. Said election shall be by ballot. The directors shall fill any vacancy occurring on the board prior to the expiration of the term of any director by electing a substitute director to serve for the unexpired term.

SEC. 12. Regular meeting of the board of directors shall be held quarterly at the office of the corporation on such day as is selected by the board of directors. Notice of such meeting shall be mailed to each director at least five (5) days prior to the date thereof, and special meetings may be held at any time upon waiver of notice of such meeting by all directors or may be called by the president or any two directors at any time: *Provided*, That notice in writing, signed by the persons calling any special meeting, shall be mailed to each director at least two (2) days prior to the time fixed for such special meeting. A majority of the directors shall constitute a quorum for the transaction of business and in the absence of any of the duly elected officers of the district a quorum at any meeting may select a director to act as such officer pro tem. Each meeting of the board, whether regular or special, shall be open to the public and the board shall at no time go into executive session.

ARTICLE 4.—PROCEDURE FOR WATERSHED PROJECTS AND IMPROVEMENTS

SEC. 13. Upon the incorporation of the watershed district the board of directors shall cause work to be commenced on the preparation of a general plan of work and projects to be undertaken by the district. Such general plan shall include surveys, maps, profiles, plans and specifications, descriptions and such other data as may be necessary for the location, identification and establishment of the character of the work to be undertaken and such other data and information as the chief engineer may require. Upon completion of the general plan a complete copy thereof shall be transmitted to the chief engineer and additional copies shall be made available to him upon request. Copies of such plans in the office of the chief engineer shall be open to inspection by the public at all reasonable times. The chief engineer shall examine and study said general plans as to: (1) Feasibility. (2) Coordination of the plan with any general plan for the watershed of which the district might be a part. (3) The safety of the works and improvements proposed. (4) The general welfare of the public. (5) Conformity with the intents and purposes of this act. The chief engineer shall transmit a written report of the results of his study and investigation to the board of directors which shall include any changes or modifications which he deems necessary and which shall include a specific approval or disapproval of the general plan.

SEC. 14. If the general plan is approved by the chief engineer the board shall fix a time and place within the district for a public hearing upon the plan. A notice of such hearing shall be given by one publication at least twenty (20) days prior to the date fixed for said hearing, setting forth the time and place of hearing upon said plan, that a copy of said plan is available for public inspection in the office of the secretary of the district and that any electors *or landowners* desiring to be heard in opposition thereto must file their written objections, in duplicate, with the secretary of the board of directors at his office at least five (5) days before the date of said hearing. Upon receipt of any such objections the secretary of the board shall immediately transmit one copy of said objections to the chief engineer. The chief engineer or his duly appointed representative may attend said hearing. At the hearing of objections, any objector who has duly filed his written objections shall be heard and may introduce evidence in support of his objections. After hearing all such objections the board may approve the plan without modification or may recommend modifications, approve the modified plan and transmit the

modified plan to the chief engineer for review. The chief engineer shall study the modified plan and shall mail his written approval or disapproval of the same to the board within thirty (30) days after receipt of the modified plan.

SEC. 15. When any general plan or amendment or change thereof has been finally approved by the board of the district and the chief engineer, in accordance with the procedure set forth in section 14, a copy of said plan shall be made available for public inspection in a public place within the district and the board shall cause a notice to be given by one publication, specifying the place where the approved plan is available for public inspection and stating that such plan will be adopted as the official general plan of the district unless written petitions protesting the adoption of such general plan, signed by electors of the district in a number in excess of twenty percent (20%) of the electors *and/or landowners* within the district who cast votes for the organization of the district, are filed with the secretary of the board within twenty (20) days after the publication of such notice. The county clerks of the counties involved shall, upon request, certify to the secretary of the board the total number of votes cast in the election for the formation of the district. If written petitions, signed by the required number of qualified electors, protesting the adoption of the general plan are filed with the secretary of the board within the prescribed time, the board shall call a special election of the electors of the district for the purpose of submitting the question of the adoption of the general plan approved by the board and the chief engineer. Notice of the time and place and purpose of such election shall be given by one publication at least ten (10) days prior to the date fixed for such election. The said special election shall be held and conducted in the same manner as for the election of directors.

SEC. 16. Following the adoption of the general plan the board of directors shall have the power and it shall be its duty to determine the order in which specific projects contemplated by the general plan shall be undertaken and shall cause accurate surveys of all work deemed necessary to be done and accurate estimates and calculations to be made by some competent engineer who shall make a written report thereof showing the amount, character and kind of work to be done and the location and estimated cost thereof, which report, together with all plans and specifications, shall be filed in the office of the secretary of the board and shall at all reasonable times be open to public inspection. A certified copy of the engineer's report, together with all plans, specifications and estimates of cost, shall be forwarded to the chief engineer who shall examine and study the same and transmit a written report of the results of his study and investigation to the board of directors, which report shall include any changes or modifications which he deems necessary and which shall include a specific approval or disapproval of the engineer's report. After the engineer's report and estimate of cost on any specific project have been approved by the chief engineer the board of directors shall carefully examine and consider the plans and specifications for the specific project and, if they shall approve the same, shall by resolution determine that the proposed work or any part thereof ought to be done and whether the cost of the specific project shall be paid by a general levy against all of the taxable tangible property located within the district or by special assessment against lands within the district to be specially benefited by such project or whether such cost shall be paid by both such general levy and special assessment and the portion to be paid by each method.

SEC. 17. If the board of directors determines that any specific project or part thereof will especially benefit any particular land within the district, it shall so find by a resolution which shall be spread on the journal of the district. Said resolution shall contain a list of the tracts of land found to be especially benefited, said tracts of land to be described as they are described in the ownership records in the office of the register of deeds in the county in which said tracts of land are located and the names of the owners thereof shall be set forth beside the description of each tract of land so listed. Upon the passage of said resolution the board shall appoint three disinterested appraisers, who shall be electors of the district, to appraise the special benefits to each of the tracts of land described in said resolution. The appraisers shall take an oath to fairly and impartially appraise said benefits and shall make a written report of their findings to the board of directors. Upon receiving the written report of the appraisers the board of directors shall fix a time and place for hearing any complaint that may be made as to the benefit to any tract of land appraised as aforesaid, a notice of which hearing shall be given by the secretary by one publication at least ten (10) days prior to the date set for said hearing. The board of directors at said special hearing may alter the benefit to any tract of land if, in its judgment, the same has been appraised too high or too low. The board shall immediately thereafter pass a resolution fixing the

benefit assessment as to each tract of ground and providing for the assessment thereof which assessment may be spread over a period of not to exceed forty (40) years and shall hold good for all installments. The board shall immediately thereafter cause a written notice to be mailed to the owner or owners of each tract of ground assessed of the amount of said assessment and that if said amount is not paid in full within thirty (30) days from the date of the notice, bonds will be issued and that an assessment will be levied annually against said tract of ground for a period of not to exceed forty (40) years in an amount sufficient to pay said total assessment plus the interest due on said bonds. No suit to set aside said assessment shall be brought after the expiration of thirty (30) days from the date of said notice. The amount levied against each tract of ground to pay for the bonds falling due each year and the interest thereon shall be levied, certified to the proper county clerk and collected the same as other taxes.

SEC. 18. The board of directors and its representatives and employees, including engineers and contractors and their employees, shall have the right and authority to enter upon private lands within or without the boundaries of the district for the purpose of conducting tests, surveys and other work incidental to the preparation of plans, maps, profiles and reports in connection with any work or proposed work of the district: *Provided, however,* That the district shall be liable for any damages caused by such entry.

ARTICLE 5—TAXATION AND BONDED INDEBTEDNESS

SEC. 19. The district board shall have authority to levy annually a tax of not to exceed one (1) mill upon the taxable tangible property within the district to create a general fund for the payment of organizational, engineering, legal, clerical and other administrative expenses. In addition to said one (1) mill levy, the district board may issue no-fund warrants to pay for initial organizational, engineering, legal and administrative expenses of the district: *Provided,* That the amount so issued shall not exceed two percent (2%) of the assessed valuation of the taxable tangible property within the district, which warrants shall be issued, bear interest and be retired in accordance with the provisions of section 79–2940 of the General Statutes of 1949 and acts amendatory thereof, except that the approval of the commissioners of revenue and taxation shall not be required.

SEC. 20. After the board has determined whether the cost of any specific project shall be paid by a general tax or by special assessments or by both such general tax and special assessments, it may, at its discretion, provide for the payment of the cost of such project by installments instead of levying the entire tax or special assessment at one time and for such installments they may issue improvement bonds of the district. Said bonds shall be issued to mature in not less than ten (10) nor more than forty (40) annual installments of approximately equal amounts each year and the first such installment shall mature not more than two (2) years after the date of issuance and the last such installment shall mature not more than forty-one (41) years after the date of issuance. Said bonds shall bear interest at a rate not to exceed [six] *four* percent ([6] *4%*) per annum, payable semiannually or at such time as may be fixed by the terms of the resolution authorizing the issuance thereof. Each bond shall specify the date of its separate maturity and shall be in such denomination as the district board shall determine: *Provided, however,* That at no time shall the aggregate bonded indebtedness of the district exceed [fifteen] *ten* percent ([15] *10%*) of the assessed valuation of all the taxable tangible property within the district as shown by the last finding of the proper board of equalization.

SEC. 21. This act shall be deemed to be supplemental to existing laws relating to drainage districts, flood control, irrigation, soil conservation, and related matters.

SEC. 22. This act shall take effect and be in force from and after its publication in the statute book.

MR. PRESIDENT: Your Committee on Agriculture recommends that House bill No. 481 be amended in section 3, line 4, by inserting after the word "property," the following: "and representing twenty-five percent (25%) of the acreage"; in section 9, line 15, by striking out the period and inserting in lieu thereof the following: ": *Provided,* That soil conservation engineering services shall be used whenever available."; in line 31, by inserting after the word "with," the following: "persons, firms, associations, partnerships and private corporations, and with"; in section 10, line 16, by striking out the period and inserting in lieu thereof the following: ", but shall be allowed actual and necessary expenses incurred in the performance of their official duties."; in section 14, line 8, after the word "electors," by inserting the words "or landowners"; in section 15, line 12, after the word

"electors," by inserting the words "and/or landowners"; in section 20, line 14, by striking out the word "six," and inserting in lieu thereof the word "four"; also, in line 14, by striking out the figure "6," and inserting in lieu thereof the figure "4"; in line 20, by striking out the word "fifteen," and inserting in lieu thereof the word "ten"; also, in line 20, by striking out the figures "15," and inserting in lieu thereof the figures "10"; and that the bill be passed as amended.

W. D. WEIGAND, *Chairman.*

The CHAIRMAN. Mr. Hill has a question.

Mr. HILL. Mr. Brey, I am sorry I did not arrive in time to hear your testimony. As Mr. Andresen said, we have our Monday morning wash to do and we have to spend a lot of time in our offices on our mail.

I used to live near Ozawkie and taught school close by. I know that area quite well. Strange as fate has been to me, we moved into a district where we have flood control in reverse. Has your organization checked into the Colorado-Big Thompson project, which is a conservancy district? We are mortgaged under an agreement that we voted on ourselves—on all our property, including the towns, to build the Colorado-Big Thompson conservancy project. In other words, we are putting water on the land, and all you are doing here is acting in reverse and trying to keep the water from destroying the land and washing it away.

This is the same problem in reverse. We had no trouble at all in organizing this big conservancy district.

Mr. BREY. Perhaps we need you to move back to the Nesbit community.

Mr. HILL. I have observed this area for nearly 40 years. This is extra water, supplementary water. That is why we had to take in all the little corporations, Mr. Chairman, that have been organized there for 60 to 75 years, and they had been putting water on the land. Now in order to bring supplemental water through the Rocky Mountains, and building a 9-mile tunnel under the Continental Divide, we had to put all these corporations that had been providing water, under a State soil water conservation district. It was, you might say, an overlapping or building of a legal machinery on top of the corporations that already existed in order to form the conservancy district.

We had to come to Congress to get an enabling act to give us the right to form Colorado-Big Thompson conservancy district. If your lawyers have not gone into detail and checked that whole matter, they are missing a lot of fine history in the way of legal matters.

As far as I am concerned it is exactly the same thing—you are trying to do exactly what we are doing only in reverse, and build up your water conservation district in a way that will hold the water back up on the hills. In fact, that is just what we are trying to do. We are trying to hold the water back up on the hills in reservoirs and then put it on this ground as supplementary water when our own irrigation systems are running short.

In other words, in a year such as we are looking forward to in 1953, when the hills are about 60 to 70 percent snow-covered, with the usual amount of snow, we expect this extra water supply to fill in these irrigating ditches, and no one can imagine what great benefit it will be to these crops, to be able to put water on beets, potatoes, on corn, on alfalfa, and beans and other crops.

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Mr. BREY. Irrigation is not practiced and is not practical in our area under the conditions that exist. We did investigate some of these projects on the Ohio and Muskingum before we established our our organization.

Mr. HILL. I think you would be much better to drive out to Colorado; you could make it a summer vacation, visit Estes Park and see the mountains and where the water comes under the Rocky Mountain Divide at Estes Park and how it goes down the Big Thompson Valley and provides power, as well as supplementary water for the farmers in that area. And talk to some of the farmers and some of the city folks. I think we are the only conservation district in the United States that the cities ever permitted themselves to be included under a repayment plan.

Mr. Andresen mentioned taxes. I have my first city businessman to complain about the Colorado-Big Thompson taxes. Every building in that conservancy district, and every city in northern Colorado has a first mortgage on it to meet our payment. So there is not apt to be any argument if you provide the proper background and understanding inside your cities. They should help, I mean.

Mr. BREY. We have visited the Washita project in Oklahoma and observed that work there before we organized our district.

Mr. HILL. I think it would pay to look into the Colorado and Big Thompson project and talk to their secretary of the organization. Mr. John Dille is the secretary and has been ever since the district was organized. It is worth while, because it is almost typical of what you are trying to do in the way of conservation in your area of Kansas.

The CHAIRMAN. Mr. Wheeler?

Mr. WHEELER. I was interested in your approach to the tax question. You said that you thought your folks would be willing to go along on the increased local tax structure because they had become convinced that they might possibly get 10 cents on the dollar back from the dollar they sent back to Washington. I am wondering how potent that argument will be unless you can hold forth to them some hope that the number of dollars they are now sending to Washington will be reduced? You say that they buy the program, as it were, on the premise that they do not like to send the dollar to Washington and get 10 cents back. I do not know how salesworthy that will be unless you can hold forth to them some hope that there will be a reduction in the number of dollars that they are sending to Washington.

If I read current newspaper reports correctly, there is not much hope that there will be any reduction in the number of tax dollars that they will continue to send to Washington.

Mr. BREY. We have had a little experience on the gasoline tax, on the percentage that comes back to local units from the amount collected by the Federal Government. That is probably the most direct.

Mr. WHEELER. I agree with you completely. I was merely wondering what your sales point would be on that score unless you could hold forth some hope that if they would tax themselves more locally, that there would therefore be a reduction in the number of dollars that they would be required to continue to send to Washington.

Mr. BREY. I think that is our job, to try to sell to the public that idea.

Mr. WHEELER. Is your argument based on the premise that if more and more of this work is done at the local level, that those farmers can look forward sometime in the future to a reduction in the number of dollars they send to Washington?

Mr. BREY. That would be my hope.

Mr. WHEELER. Thank you.

The CHAIRMAN. We think you very much, Mr. Brey.

The next witness is Mr. Lloyd Lueck, of Holton, Kans. I notice Mr. Lambertson, a former distinguished Member of Congress, in the audience.

Would you come up and sit with the committee? I would be glad to have you do so.

Mr. LAMBERTSON. Thank you for the offer, Mr. Chairman. I will sit here with the other group.

The CHAIRMAN. You may sit wherever you like. We would be glad to have you up here.

STATEMENT OF LLOYD LUECK, DIRECTOR AND VICE CHAIRMAN OF THE DELAWARE RIVER WATERSHED ASSOCIATION

Mr. LUECK. My name is Lloyd Lueck. I live at Holton, Kans. I am a director and vice chairman of the Delaware River Watershed Association. Someone asked for some statistics on how our people are cooperating at this time. I have those figures here for the two little watersheds that are up for immediate consideration inasmuch as they have been surveyed and also for the counties complete.

On Bills Creek we have 137 farms, comprising 15,744 acres. At the present time we have under application, active in the soil conservation, 32 applications covering 5,765 acres. There are an additional 18 applications that are in but have not yet been acted upon.

The acres under those 18 plans amount to 3,428 acres. That is approximately one-third of the acreage of the Bills Creek watershed. All of those applications have been taken and started work on, or planned within the last year.

It so happens that the Bills Creek area is perhaps one of the most neglected in our entire watershed so far as soil conservation is concerned.

Incidentally, the original plan for the Little Delaware was worked out and then later Mission Creek was added, which is really a tributary of the Little Delaware. On the Little Delaware proper we have 98 active plans and 32 that are in the course of being planned, and only 25 noncooperators.

That only comprises 3,401 acres, which is really a very high percentage. On the Mission Creek addition, the number of plans are 46; additional applications are 4; the noncooperators at this time are only 14, and it only represents 1,360 acres.

So you gentlemen will see that those two particular areas that are included in that list of 48 watersheds that are up for consideration for appropriations are pretty well covered.

Mr. ANDRESEN. What is the argument that these noncooperators use?

Mr. LUECK. For the most part in Bills Creek they are nonresident old people. We are going to have a little difficulty with some of them I will tell you that frankly. They are folks who own that land, who

live away, and they are elderly people, and they are depending on that land for a little income, but are not willing to put much back into it. It is going to take some education. It is going to take some work to get them in. I am not too worried about the situation.

Mr. HILL. If you have an enabling act in on your State statutes, and you hold an election and say 30 or 40 percent in that enabling act, binds all the folks in the watershed, you will not have any trouble.

Mr. LUECK. That is true.

Mr. HILL. Do you not have that in the law? I know nothing about your law.

Mr. LUECK. We do.

Mr. HILL. How can you have trouble with a man if you have him tied in under a State enabling act? What percentage of the farmers under the conservation district must vote for it in order to make it binding on all the farmers?

Mr. LUECK. A majority.

Mr. HILL. Just a majority?

Mr. LUECK. That is right.

Mr. HILL. Then why would you have trouble with opposing farmers?

Mr. LUECK. Let me make this statement. Everything that has been done so far has been strictly voluntary. We have no enabling legislation, and we cannot use that until the 1st of July, because it does not come into effect until ——

Mr. HILL. Then you have no trouble?

Mr. LUECK. No. Then we can compel them. But I will say this, for the board of the watershed, and the board that will be in the new watershed under the new law: We are determined to stay away from force and coercion as much as possible.

In other words, we want it voluntary and friendly if we can get it. If we have a few hardshells that we cannot do anything with, we have to take the other course.

Mr. HILL. Yo might have them where they have the land and in order to work out the matter successfully you have to have power to do it. I am sure that is what Mr. McIntire had in mind when he asked about the right of Federal domain. How could you build a ditch through a man's farm if your irrigation project requires a ditch to go right through his farm, and he says "Nothing doing", and you cannot go around it. That would be the end of your ditch.

We do not do that. We say that is where the ditch is going, and regardless of what it does to your farm it is going right down through the farm.

Mr. LUECK. We have that right, of course, of eminent domain. However, I will say that in my opinion a soil-conservation plan for the prevention of soil erosion and water control and flood prevention is quite a different proposition than irrigation.

Mr. HILL. I do not know about that. What are you going to do if you want to build a little dam where you cover up some of the good land of a farmer? What are you going to do about that?

Mr. LUECK. We are going to have to condemn it and take, it that is for sure.

Mr. HILL. You will have to get tough with some of them. Some of them might say, "We don't want to cooperate."

Mr. LUECK. Knowing the people who live in this particular district, I just do not anticipate too much trouble because I know how con-

servation-minded they are. They have seen what has happened to their farms, both in 1949 and 1951, when we had such an excessive amount of rainfall. They have stood by and watched the sheet erosion and gully erosion on those farms until they are desperate. They want something. They will welcome something.

All they need is some help. Those farmers are perfectly willing to spend some money, but they do believe that the cost of this work should be somewhere on the basis of benefits.

In other words, a farmer does not own a farm, he controls it temporarily. As you said a while ago, or someone said, most of us who are active now will be dead and gone long before these plans are completed, and someone else will have it.

But the Government has an interest in that from now on, as long as this Government exists.

Mr. HILL. What about the little towns and incorporated cities?

Mr. LUECK. Unfortunately—maybe it is not—first- and second-class cities are excluded.

Mr. HILL. If there is anyone going to receive any benefit from what you are talking about, certainly the city folks will receive the benefits.

Mr. LUECK. That is right.

Mr. HILL. So you have just as much right to have the business firms, the bank buildings, and the opera houses, because they are the key to the progress of all local communities. So, as far as I am concerned, I for one said if the cities are not coming in I am not voting for the conservation, and neither would I vote for it if the cities had not come in.

Mr. LUECK. That was done by the legislature. I believe that it does permit cities to voluntarily vote themselves in.

Mr. HILL. That means they will never come in.

Mr. LUECK. More than likely. If I may digress a little: You mentioned the extra cost of your Big Thompson proposition. Was that not based a little on some faulty engineering?

Mr. HILL. I do not think it was faulty. It was just lack of information. When I voted for it, I never heard of such a thing as a multiple project where they had a lot of power that they were going to produce, and neither did they.

Mr. LUECK. I know a little bit about that proposition, and your cost there is your water lift on the west slope. That is your real cost.

Mr. HILL. The cost is in the power. The water has not cost us as much as we thought it would. The real cost has been adding on the power, putting in the power plants and the big dams.

Mr. LUECK. On the 5 counties that are in this, I have the complete soil conservation records on all of them for the entire counties. However, our particular watershed only comprises a part of each of those 5 counties. No complete county lies in this particular watershed. It varies in different counties. For instance, Brown County, which was the first county organized as a soil conservation district, the percentage is very high. It is almost 75 percent. While in Jackson and Jefferson counties, which were the last ones, it runs possibly 33⅓ percent.

But it is moving along rapidly. Sentiment is very strong for it. The only thing we need is just a little something from the government to give us the boost. This spring the PMA sent out their

committeemen and approached every farmer in those counties and asked them to sign up for what projects they wanted to this year.

In my own county of Jackson the estimated cost of what was signed up to be accomplished this year would run—that is the Government's share of it, on the basis of participation by the Government, or benefits—something like $260,000, and we actually have around $40,000 appropriated to Jackson County to pay on that.

What we need and need desperately is an accelerated program such as we hope to have in an authorized watershed and enough money to meet the farmer's money to do all the practices except the big structures, the detention dams. Naturally when the farmer has treated his land with stabilized waterways and terraces, strip farming, gully plugs and the various things and then what water does escape from then on becomes a public nuisance and a public problem.

We feel that there is where the Government should step in and pay the major portion. As I understand it under the soil conservation estimate, which I have here, and I am sure you gentlemen have, the Government will pay about 90 percent of the large structures. It is left entirely to the local people to provide the easement on those locations.

That is one of the functions, of course, that our association will have to assume. But the main thing is to get it started. That is why I am here. It is a pleasure to be here and talk about it. But I certainly do hope that this committee will recommend that something be done along the line of giving us the boost we need, getting behind this plan, and let us see whether we can control floods or prevent floods, rather than control them.

As Mr. Brey said, there is a proposed dam, Perry Dam, at the lower part of our valley, which, if constructed, would be nothing in the world but a trap for the soil that we are losing up the valley.

Let's treat the soil where the water falls so that we can keep it there.

Mr. HILL. We had a hearing on this in Topeka which I attended and at which I listened to the testimony. I know that area quite well.

Mr. LUECK. I was at that hearing, also.

Mr. HILL. I have been at Williamstown many times. I could not help but feel that you are just as right as you can be that there is no use in building a big dam and catching the water after it has started. What we should do is stop the water where it falls. We are very much interested in this in Colorado.

We have a more serious problem than you do because our water flows so fast. It just takes everything that it touches. Your water, regardless of what they tell you, the water on those hills, unless you get back in the steep part, does not come so fast.

Certainly I feel that you are exactly right. Up where it begins you must have the dams. The question I want to ask is this: How are you going to get a farmer in the foothills to do what we know he ought to do? How are you going to convince him to do that?

Mr. LUECK. It depends on the farmer. We have to use different methods. But there is an approach to nearly every farmer, to get him to fall in line. I know that right at the present time some of the folks that fought us the hardest when we organized our particular

county in the soil conservation district are today the best cooperators, the biggest boosters.

One particular case that I could name came out in our local paper the day before the election with a tremendously strong letter against it, and it had the effect of killing our project for the first time.

We had to come back and reorganize and have another election. That man today has been designated as the model conservationist of Jackson County. He has been given publicity all over the United States. The picture of his farm has appeared on the cover page of one of the principal farm journals. He is just for us tooth and nail. Yet he fought us just as hard as a man could when we attempted to organize the soil conservation district.

I am now convinced that the same thing will work out down the line.

Mr. HILL. I am also convinced that if you do not have the power of forcing the farmer to do the very minimum of work on this conservation program, then you are going to lose the value of the project right at the beginning.

Mr. LUECK. I am satisfied that our district will be formed under the State law and we will have that power. But we cannot do that until after the 1st of July.

Mr. ANDRESEN. Mr. Chairman?

The CHAIRMAN. Mr. Andresen.

Mr. ANDRESEN. I would like to clear up in my mind the extent of your soil conservation district. You are operating in a unit known as the watershed for that entire area. Is that correct?

Mr. LUECK. Yes, sir.

Mr. ANDRESEN. I though Mr. Brey said that you had 12 different units within the watershed. Is that right?

Mr. LUECK. There are what I might say 12 principal tributarties to the Delaware River. In order to get a fair representation from each district, we just took the subwatershed of those 12 creeks as a basis to take 2 directors out of each of those so that we would have representation well scattered all over the district.

Mr. ANDRESEN. How large an area does that watershed cover?

Mr. LUECK. 1,144 square miles.

Mr. ANDRESEN. That goes into several counties.

Mr. LUECK. Five. And of that, the 2 little creeks that are up here now, Bill's Creek has 25 square miles of area, and Little Delaware and Mission Creek have 44 square miles.

Mr. ANDRESEN. You can go ahead and deal with one particular watershed for a smaller creek to fit into the entire program of the entire area without destroying the work that you have done.

Mr. LUECK. That is right. A city is not built as a unit. They put in a sewerage plant over here, something else over there, and that is the idea that we have on this, to take it piecemeal, as we can.

The CHAIRMAN. Are there any further questions?

Mr. MCINTIRE. Just to clarify a point, if you would: Would you tell me when your first SCS district was organized within this watershed?

Mr. LUECK. That I cannot tell you. The last one is 5 years old. I rather believe that the first one is 11 years, but I will not make that as a positive statement.

Mr. McINTIRE. You were speaking about the present time when you stated approximately one-third of these farms within the area are cooperating.

Mr. LUECK. They have active plans on their farms. I would say that in the oldest district it runs around 80 percent, and that is Brown County. It would run about the same in Nemaha County. Nemaha County has one situation there where they have a lake, the Sebetha that is silting badly.

It is their water supply. All the farmers there have signed up and it is working actively. PMA has made a special appropriation to help them on that this year. The work is in progress on the entire little watershed that drains into the Sebetha Lake.

Mr. McINTIRE. What percentage of the farmers in the watershed district are of the owner-operator type?

Mr. LUECK. Probably 75 percent are owners. It runs high.

Mr. McINTIRE. This problem that you mentioned of absentee ownership, if I understood your reference, involves only about 25 percent of the farms in the district?

Mr. Lueck. I stated that as a part of this little Bill's Creek. That is not uniform over the entire watershed. But we do have this Bill's Creek which has been neglected.

The reason it has been neglected is because there is a considerable portion of that land owned by absentee owners and they happen to be elderly people for the most part.

Mr. McINTIRE. A higher percentage in this instance than in the other areas?

Mr. LUECK. Yes, sir. They did not want to put in, they just wanted to take out. Frankly, it cannot be too many years until some of that will change hands.

Mr. McINTIRE. In looking over this legislation, I have one question which came to my mind relative to your privilege of taxation. Those assessments may be made on the basis of the valuation within the district. I notice your bond limitation and so forth. How are these set up under your laws for collection?

Do they come ahead of the taxes assessed by the county? Suppose you run into a situation where you have assessed against a certain farm for your water district and in turn that property is delinquent to the county for its taxes. Who has the prior lien?

Mr. LUECK. I think it would be even. In other words——

Mr. McINTIRE. It could not be equal under the law. One would have to be ahead of the other.

Mr. LUECK. This is not a special, it is a political subdivision just the same as a school district or country, under this bill.

Mr. McINTIRE. Yes, but the county subdivision came first, in order of history, to your conservation district. Let's say that you had a situation where a lien—I do not know what your lien laws are in Kansas—where your taxes are unpaid and where the county has proceeded to secure for taxes at county level, and there are taxes unpaid to your conservation district. Presumably the land is holding for the tax; if title is to go over to secure the tax, if title passes as a means of collecting the tax, is the county responsible to pay the assessment of the district, or does the district lose its tax?

Mr. LUECK. The taxes are assessed. There is a State tax, county tax, road tax, township tax, whatever it might be, and it is all pre-

sented in one statement. If it is not paid, there is no way to go in and say "Pay your school tax" and leave the rest of it unpaid.

Mr. McINTIRE. Then you are going to incorporate your watershed district tax into the same bill as the school tax and road tax?

Mr. LUECK. Yes, sir. That is what it becomes, a political subdivision on the same basis.

Mr. McINTIRE. Is the county treasurer to collect the water district assessment?

Mr. LUECK. There will be no special assessment on it. It is collected right along, by the county treasurer, the same as and on the same tax bill as all the others.

Mr. McINTIRE. Then your county treasurer will reimburse your watershed organization?

Mr. LUECK. I did not get that.

Mr. McINTIRE. The county treasurer will reimburse, that is, he will account to your watershed district?

Mr. LUECK. Yes, sir; just like they do to the school districts for their tax.

Mr. McINTIRE. Of course, you have a little different organization. My home is in New England. There we have a municipal organization and our county is rather a minor part of our municipal organizations.

Mr. LUECK. In other words, you pay taxes in several places?

Mr. McINTIRE. The State and county tax is assessed with the tax that we pay into our township. I was wondering who actually collects the taxes.

Mr. LUECK. In Kansas, when taxes become delinquent—and it is all the taxes in one bill—the county takes title to the land and holds it for a period of 2 years. If it is not redeemed in those 2 years, it is sold at public auction.

Mr. McINTIRE. And your water district is protected in that same tax assessment?

Mr. LUECK. It is on the same basis, unless I am mistaken and I do not believe I am. There may be men here who can answer that more specifically than I, but I really believe that is correct.

Mr. McINTIRE. Thank you.

The CHAIRMAN. We thank you very much, Mr. Lueck.

Mr. LUECK. It has been a pleasure to be here.

The CHAIRMAN. The next witness is Mrs. Harold Rohrer.

STATEMENT OF MRS. HAROLD ROHRER, JUNCTION CITY, KANS.

Mrs. ROHRER. I represent the Clark's Creek watershed. This watershed is very small compared to many of the others, but it is very important to us. This watershed is 35 miles long and 25 miles wide at its widest point. It is comprised of 244 square miles, approximately 156,500 acres.

This is in both Geary and Morris Counties, and we have only one small town and it is very small, in our Clark's Creek watershed area.

It was not until December 1951 that those of us who lived on the creek had any idea that we were going to be covered up by a big dam. After the flood in 1951 Colonel Lincoln made the statement that——

The CHAIRMAN. When you refer to Colonel Lincoln, you mean Col. Lincoln of the Army engineers' office in Kansas City?

Mrs. ROHRER. Yes. He made the statement that Prairie, Tuttle

Creek, and Milford Dams, had they been completed, there would have been no flood at Kansas City.

But yet, in 60 days, they came up with 22 dams for the creeks of Kansas. Why did they need them if the others would have helped?

They also made the statement that yes, it was very well to have soil conservation but that still would not make any difference to the main stream.

I wish somebody would tell me what a flood is if it is not the product of the tributaries that flow into the main stream. In our county we had—this is in Geary County, and I will not say the same for Morse County because we do not have the cooperators—more than 60 percent of our county were cooperators in the soil-conservation program, and of course since the flood of 1951 we have scores asking for help.

Of course we get the same answer: There are no funds. We have many places in our county where we need dams. We will say, for instance, one farmer has a place perhaps where his property would not be benefited by these detention dams, but still they are needed to protect the people below.

We feel that we should have some help on these dams because the farmer cannot afford to go in and pay perhaps ten or twenty thousand dollars to put in these detention dams to protect the people below him.

Clark's Creek has literally hundreds of places where we can put in farm ponds, gully plugs, small detention dams, and even the larger detention dams. Many of you, I know, are familiar with Kansas and you know that we are plagued with drought far more often than we are plagued with floods. At the present time the Flint Hill pastures have only been filled to 86 percent of the cattle that are to come in but our surface water is so low that they just cannot depend on putting their cattle in because they are afraid that there will not be water for them.

We feel that if we can hold this water on the land where it falls that we will have flood control and also we will protect our soil and have water for our cattle.

I think if you have read—and I am sure have—how very, very low the water table is in Kansas, we certainly need to do everything we can to hold that water on our land so that we will not only keep our land but also keep the water that falls.

I think that is all that I have to present. Of course we are a small area and we have only been organized since 1952. Of course we did not realize that we locked the barn after the horse was stolen. That is what we did. We are doing everything we can to remedy that condition.

We are willing to cooperate in every way and we certainly do favor the principles of the House bill 4877 introduced by Mr. Hope.

The CHAIRMAN. Do you expect to organize under the new Kansas Watershed Act?

Mrs. ROHRER. Yes, sir. We have already organized as the Clark's Creek Watershed Association and we belong to the State watershed association. We feel that we are ready now to go ahead and really do something, and use this law, which goes on the statute books on the 1st of July.

The CHAIRMAN. Are there any further questions? If not, we thank your very much, Mrs. Rohrer.

Mrs. ROHRER. Thank you.

The CHAIRMAN. Our next witness is Mr. J. W. Farmer.

STATEMENT OF J. W. FARMER, EUREKA, KANS., REPRESENTING THE GREENWOOD COUNTY SOIL CONSERVATION DISTRICT, THE TORONTO FLOOD CONTROL ASSOCIATION, AND THE EUREKA CHAMBER OF COMMERCE

Mr. FARMER. Mr. Chairman, members of the committee, I am J. W. Farmer, of Eureka. I represent the Greenwood County Soil Conservation District, the Toronto Flood Control Association, and the Eureka Chamber of Commerce. In general, we are glad to support the principles involved in House bill 4877 and we are also glad to endorse the appropriation bill for these 48 watershed projects which are now under consideration for appropriation.

That material that I want to present principally consists of two things. First, I want to give some material to show the tremendous high cost and waste in trying to prevent floods by big dams, and to show that we can store more water on the watershed and that we can do it more economically on the watershed to provide water supplies and flood prevention for entire valleys.

I refer to a prepared statement which I have presented to the clerk. The Toronto Dam, on the Verdigris River in Kansas, is 1 of 4 which has been authorized by the Congress since 1941. This particular dam, according to the present estimate, costs $17,361,000 to drain water from 750 square miles. That involves a cost that amounts to $23,148 for each square mile in the watershed to catch the water off each square mile.

Above that particular proposed dam it will cost $23,148, or $36.16 for each acre in the watershed above that particular dam. Furthermore, in this particular dam costing a total of $17 million, $5 million goes merely for relocating railroads, pipelines, and roads. If that $5 million were spent in the watershed area, there would be very little cost, or no cost in our area for the relocation of the property.

The CHAIRMAN. That money would all be paid by the Federal Government, would it not?

Mr. FARMER. Yes.

The CHAIRMAN. Local people do not participate in that in any manner whatsoever?

Mr. FARMER. No. But I want to point out the fact that it is possible to save over $5 million of the $17 million if we would do the work on the watershed rather than at this particular point. I would like to refer to some maps. This is a map of the State of Kansas. I am talking about the area right here which is the area above the Toronto Reservoir. My other remarks will be in regard to this particular area which involved the four reservoirs proposed by the Army engineers. The money for the Toronto Dam amounts to $17 million to catch water from 750 square miles. The next one, already built, Fall River, $10 million to catch water from 573 square miles. The Neodesha, $15 million to catch water from only 410 square miles, which amounts to $38,000 to catch the water of each square mile of that reservoir.

The Elk City, $24 million to catch water from 635 square miles, or $38,000 to catch the water of each square mile. So the average for the Verdigris Valley in Kansas, 4 big dams, is $28,800 to catch the water off each and every square mile in the watershed.

Furthermore, in regard to area inundated and area protected, the 4 reservoirs will inundate 40,700 acres and protect 80,700 acres. So we are covering up 40,000 acres in the reservoirs, upstream, to protect 80,000 downstream.

The public, which pays the bill, has 40,000 net acres sticking out of the water. If we divided the 40,000 acres into the cost of the 4 reservoirs, $68 million, we find it will cost $1,705 to protect each acre downstream from those 4 reservoirs. That would amount to a total of over a million dollars for each and every square mile given some protection.

We know that the land in the reservoir will not be flooded every year, but we also know that the land downstream, the so-called protected area, would not be flooded every year, either, and we know further that even though the area downstream is flooded sometimes, most every year the floods come in the spring so that the crops would be planted afterward.

Now we will refer to the July flood of 1951. This is Oklahoma, this is Kansas (indicating). The four reservoirs that catch the water are up here; the protected river bottom is down below. We are spending $68 million to protect land at the rate of $1,705 per acre in this bottom land. Referring to the Toronto Reservoir, under consideration, it is located about 55 miles from the headwaters of the Verdigris River. The Verdigris River starts near the town of Emporia in eastern Kansas.

At the town of Madison there were 128,000 cubic feet per second during the July flood. At the dam site, down here, there were 130,000 cubic feet per second during the same flood. So the point there is that the reservoir is located too far downstream to have protected very much of the area.

Furthermore, down the river where the floodwaters could spread out, the great flood in the lower part of the Verdigris Valley amounted to only 71,000 cubic feet per second at Altoona, below the proposed Toronto Reservoir. Those facts are given in the United States Geological Survey Record Book, Water Supply Paper 1139.

Now we can refer to the original House Document No. 440 of the 76th Congress. In that document we find that the Army engineers themselves state that the four projects recommended are not justified by direct benefits and they have to bring in a number of intangible benefits, such as stoppage of traffic, recreation, and so forth, in order to justify these. We will refer to that same House document in which the Army engineers tried to justify this expenditure, they state that the total value of the property in the Verdigris Valley in Kansas—land, railroads, buildings—all total $17 million. However, the 4 projects that they want to use to protect $17 million worth of property amounts to $31 million.

They are spending $31 million to protect $17 million worth of total property. In listing the total property they include the real estate and buildings above the reservoirs. There is a total area of 4,003 square miles above the town of Nowata, Okla., which is the lower end of this area involved, and we are spending over $68 million in the upper area in 4 reservoirs to catch the water that comes down this lower valley.

If we took the $68 million and spread that equally over every square mile, both above and below the reservoirs, we would have

over $17,000 to spend for soil conservation and water retarding projects.

Mr. HILL. That is on each farm?

Mr. FARMER. On each and every square mile in the valley.

Mr. HILL. That is on each section?

Mr. FARMER. Yes, sir. The first figure I gave indicated that it cost $28,800 to catch the water from the area above the reservoir. So it costs $28,000 to catch the water from each square mile above.

Now, if you took the money from those four reservoirs and applied it to both the area above and the area below the bottom land, and the side creeks, we would have over $17,000 to spend on each and every square mile, which would provide water for the individual farms and the cities throughout the entire area.

Mr. MCINTIRE. You were referring to the cost per acre of land. What is a fair agricultural value for the land involved?

Mr. FARMER. Our upland in the area runs from $40 to $60 an acre. The bottom valley land runs from $100 to $300 per acre.

Mr. HILL. Let me ask a question, if I may. The trouble with the big dams in our area in many instances is that everyone wants to keep them just as full as they can, a third full or two-thirds full, before the flood comes. I suppose you have no trouble with that.

Mr. FARMER. We have 1 dam built, of these 4.

Mr. HILL. Did you see that or is that rumor? I had trouble in Kansas trying to get the information; when I got right down to it nobody saw it. Do you know of anyone who saw the dams full when the floods came?

Mr. FARMER. I saw it.

Mr. HILL. You saw it yourself? When did the floods come?

Mr. FARMER. I visited the Fall River Dam on the Fourth of July 1951 and the flood came on July 11 or 12.

Mr. HILL. How full of water, percentagewise, was it when you saw it?

Mr. FARMER. It was practically full. When the big flood came the reservoir was already full and they started to release water. So they had to release water during flood times in order to keep the water down in the reservoir. Furthermore, on page 208 of the Geological Survey paper, Document 1139, which I referred to, which is prepared by the Geological Survey in cooperation with the Army Engineers and the Weather Bureau, all three departments cooperating in checking each other's records, you will find that listed.

Mr. HILL. You mean you will find the percentage that it was full of water on July 4?

Mr. FARMER. You will not find the percentage, you will find how many acre-feet of water are in it and we have other records which give the total capacity. I would say it was 95 percent full.

Mr. HILL. I might tell you my own feeling about it. I couldn't help but smile when they gave the testimony at Topeka, Kans., about building wonderful dams—one fellow's testimony particularly that it would be a wonderful thing. When the floods come, and what they could do to towns, somebody here might investigate. We must have authority and the power to keep the water out of it.

It has been my experience, too, from what I have seen. I am not guessing. I am telling you what I know and what I have seen myself. That is why I was careful to ask if you saw that water.

Mr. FARMER. I would like to comment a little further along that line. The flood below the proposed Toronto Reservoir in July 1951 amounted to 130,000 cubic feet per second. However, in order to have a safe dam the Army engineers have a spillway in the proposed Toronto Dam which will discharge 222,000 cubic feet per second. So the discharge capacity of this proposed Toronto Dam is greater than the flood they had in July of 1951.

The Army engineers also state that had this Toronto Dam been in, it could have reduced the flood only 34,000 cubic feet per second, which would have reduced the flood below the Toronto Dam by approximately 1 foot. They state further in the original justification that the dam is not designed with enough capacity to control the great floods that can be expected in the valley.

So I think it would be well for everybody who advocates these big dams to study the discharge capacity of their spillway to know what they can expect if that dam is filled to its maximum. We all recognize the desirability of stopping water as nearly where it falls as we can. So I am going to change now to another subject.

I come from the Flint Hill area of Kansas, which is the area which extends north and south through the State from Oklahoma northward to Nebraska. It is a hilly pasture region, covered mostly by the original grass. It is virgin land.

In that area there are very many hills and ravines to make it possible for us to store water on the watershed. Our State board of agriculture has made some surveys to indicate that we have water storage capacity in our area to store at least 5 to 10 inches of runoff on at least 50 percent of our land.

So we do have water storage facilities in our area, and this area comprises the watersheds for the Fall River, the Verdigris, the Neosho, the Marias des Cygnes Valley, and much of the Blue Valley area. I have data here which is of little use without interpretation, but it shows the amount of water that can be stored in a typical area in the Flint Hill country. I will also add a map which shows the drainage area and the number of creeks and ravines in there. Each little square shows the——

Mr. POAGE. Each square represents a section.

Mr. FARMER. Each square section. They show the sections, ravines, or creeks. This shows the large number of water storage sites which we have throughout the Flint Hill area of Eastern Kansas.

Mr. HILL. Thank you very much. Are there any questions? If not the next witness is Mr. Howard K. Woodberry.

(The document, No. 6, above referred to is as follows:)

TORONTO DAM ON VERDIGRIS RIVER IN KANSAS

The Toronto Dam is part of a four-reservoir system planned by the Corps of Engineers and authorized by Congress in 1941.

The area involved includes the Elk, Fall River, and the Verdigris River Valleys in Kansas and Oklahoma, as far down as the Oologah Reservoir. The Caney River watershed is excluded.

Details were published in House Document 440, of the 76th Congress, 1939.

TORONTO DAM

Cost: $17,361,000 (1953 estimate).

Drainage area: 750 square miles.

Cost of catching runoff water from each square mile in watershed above the Toronto Reservoir is $23,148, or $36.16 per care.

Inundates 10,000 acres.

Protects primarily 15,000 acres from dam down to upper end of Neodesha Reservoir.

Not designed to control the great floods, as 1904 and 1951.

Details of first cost

Relocations	$5, 195, 000
Spillway structure	6, 923, 000
Earth embankment	1, 775, 000
Land	2, 267, 000
Other	1, 201, 000
Total	17, 361, 000

Most of the high cost of relocations (railroads, pipelines, etc.) could be avoided if the flood control structures were located in the watershed, where pastureland is available for adequate sites. Furthermore, cheaper land would be used in the upstream sites.

The Four Reservoir System, Verdigris River in Kansas

Project	Estimated cost	Square miles in watershed	Cost per mile of watershed
Toronto	$17, 361, 000	750	$23, 148
Fall River (completed)	10, 762, 000	573	18, 782
Neodesha	15, 686, 000	410	38, 258
Elk City	24, 390, 000	635	38, 409
Total	68, 199, 500	2, 368	[1] 28, 800

[1] Average.

	Acres
Area to be given a high degree of protection (except in the great floods) by the 4 reservoirs, downstream to the upper end of the Oologah Reservoir	80, 700
Area inundated by:	
Toronto Dam	10, 000
Fall River Dam	10, 400
Neodesha Dam	7, 100
Elk City Dam	13, 200
Total	40, 700
Net acreage protected	40, 000

The net gain of 40,000 acres of highly protected land, at a cost of $68,199,000 for the 4 reservoirs, amounts to $1,705 for each acre downstream to the upper end of the Oologah Reservoir; making a total cost of $1,091,200 for each square mile.

Some land below the Oologah Reservoir may receive partial protection. Other benefits such as water supplies, recreation, etc., can offset part of the charge against the land.

RESERVOIRS NOT DESIGNED TO CONTROL GREAT FLOODS

The four reservoirs are not intended to completely control the great floods, such as in 1904 and 1951.

Records show that the July 1951 flood was greater above the proposed Toronto Dam than below the site. (Reference: U. S. Geological Survey Water Supply Paper No. 1139; p. 208.)

Maximum discharge during July 1951 flood in cubic feet per second on Verdigris River

Madison, 55 river miles above Toronto Dam site	128,000
Coyville, about 5 miles below Toronto Dam	130,000
Altoona, about 40 miles downstream from Toronto Dam	71,000

If the Toronto Dam had been in operation in 1951, it would have been practically full from heavy June rains. The Corps of Engineers state that the Toronto Dam could have reduced the flood stage about 1 foot, or 34,000 cubic feet per second, leaving a flood peak of 96,000 cubic feet per second.

Had both the proposed Toronto and Neodesha Dams been built and in operation, they could have reduced the July 1951 flood peak only about 2 feet downstream from the Neodesha Reservoir.

The Toronto Dam spillway is designed to discharge 222,000 cubic feet per second, to safely pass the maximum probable flood.

NOT JUSTIFIED BY DIRECT BENEFITS

The Corps of Engineers report, page 3, House Document No. 440, states that the total tangible benefits from the four reservoirs do not justify the project. It uses intangible benefits to produce a favorable cost-benefit ratio.

The cost of the four reservoirs was estimated at $31,023,600 in 1939. But the total value of all the land and property in the entire valley, both above and below the reservoirs, was listed at only $17,393,100 in the same engineer's report. The cost of the project is twice the value of the property it is planned to partly protect.

(See photo copies of pp. 24 and 33 of H. Doc. 440.)

TABLE 16.—*Estimated property values in the flood plains*

Reach	Rural property				Urban and industrial	Roads and railroads including bridges	Telephone, telegraph, power, and pipelines	Oil and gas wells	Total
	Acres of farmland	Average value per acre	Total value of farmlands	Rural churches and schools					
VERDIGRIS RIVER									
Greenwood County	16,600	$78.00	$1,294,800		$177,700	$360,200	$64,000		$1,896,700
Woodson County	2,700	49.30	133,100			54,200			187,300
Wilson County, above Neodesha Dam site (mile 222.8)	20,500	70.17	1,438,400	$3,800	437,500	409,600	174,200	$4,500	2,467,800
Wilson County, below Neodesha Dam site	5,100	76.92	392,500		43,100	291,200	128,700	58,500	823,800
Montgomery County	29,600	61.36	1,816,400		1,808,700	914,500	135,100	274,500	4,949,200
Total for Verdigris River	74,500	68.12	5,075,000	3,800	2,466,800	1,939,700	502,000	337,500	10,324,800
FALL RIVER									
Greenwood County, vicinity of Eureka, to Fall River Dam site (mile 54.2)	9,800	52.97	519,100	1,200		460,400	10,100		990,800
Greenwood County, below Fall River Dam site	2,500	90.88	227,200			69,100	18,000	3,000	317,300
Elk County	2,000	92.45	184,900						184,900
Wilson County	13,400	99.87	1,338,300	500	928,300	542,600	161,100		2,970,800
Total for Fall River	27,700	81.93	2,269,500	1,700	928,300	1,072,100	189,200	3,000	4,463,800
ELK RIVER									
Elk County, below vicinity of Howard	11,000	54.94	604,300	800		192,700			797,800
Montgomery County, above Elk City (table mound) Dam site (mile 8.7)	11,200	60.22	674,500	1,800	30,000	240,700	300,100	5,000	1,252,100
Montgomery County, below Elk City (table mound) Dam site	2,600	70.12	182,300			84,400	267,900	20,000	554,600
Total for Elk River	24,800	58.92	1,461,100	2,600	30,000	517,800	568,000	25,000	2,604,500
Total for Verdigris, Fall, and Elk Rivers	127,000	69.34	8,805,600	8,100	3,425,100	3,529,600	1,259,200	365,500	17,393,100

Page 24, House Document No. 440, 76th Congress, 1st session (1939).

TABLE 23.—*Engineering features of Toronto, Neodesha, Fall River, and Elk City (Table Mound) Reservoirs*

Feature	Toronto Dam	Neodesha Dam	Fall River Dam	Elk City (Table Mound) Dam
Location	Verdigris River, mile 271.	Verdigris River, mile 222.8.	Fall River, mile 54.2.	Elk River, mile 8.7.
Drainage area above dam, square miles	750	410	573	635.
Type of dam	Rolled earth fill.	Rolled earth fill.	Rolled earth fill.	Rolled earth fill.
Crest length, feet	6,010	5,050	6,570	4,750.
Crest length of dike, feet				14,000.
Maximum height of dam, feet	48	34.5	65	55.
Flood control storage, acre-feet	140,000	80,000	224,000	236,000.
Conservation storage, acre-feet	20,000	10,000	39,000	14,000.
Total storage, acre-feet	160,000	90,000	263,000	250,000.
Area inundated at maximum pool acres	6,900	7,500	10,400	11,600.
Spillway capacity, cubic feet per second	184,000	250,000	240,000	234,000.
Type of spillway	Controlled in dam.	Controlled in dam.	Controlled in dam.	Controlled in dam.
Sluice capacity (controlled), cubic feet per second	Variable	Variable	Variable	Variable.
Top of dam, elevation, feet above mean sea level	939.0	829.5	995.5	829.5
Maximum pool, elevation, feet above mean sea level	931.0	823.5	987.5	822.0
Spillway crest, elevation, feet above mean sea level	906.0	803.0	962.5	797.0.
Bankfull capacity, cubic feet per second	14,000	14,000	13,000	12,000.

82. The total estimated construction cost, investment, annual carrying charges, and benefits are given in table 24.

TABLE 14.—*Estimated cost, investment, annual carrying charges, and benefits, at Toronto, Neodesha, Fall River, and Elk City (Table Mound) Reservoirs*

Cost of dam and reservoir:	
Dam (including reservoir clearing, camp, dikes, engineering and contingencies)	$22,949,000
Lands (including legal expense and contingencies)	2,956,700
Railroad, highway, and other damages (including engineering and contingencies)	4,214,300
Total construction cost (appropriation required)	30,120,000
Investment:	
Total construction cost	30,120,000
Interest during construction	903,600
Total investment	31,023,600
Annual carrying charges: Interest, depreciation, operation, and maintenance	1,266,100
Estimated average annual benefits (see appendix 4 [1])	1,400,000
Ratio of annual charges to annual benefits	1 to 1.11

[1] Not printed.

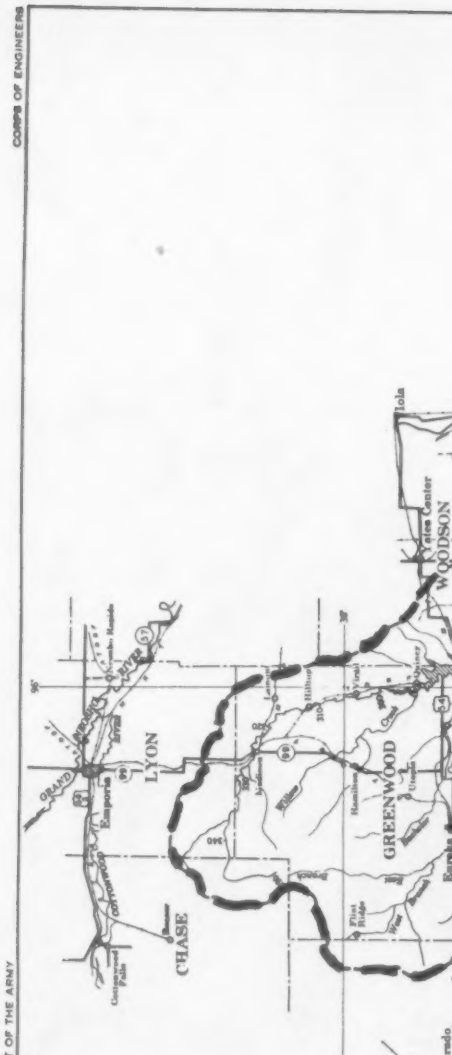
Page 33, House Document No. 440, 76th Congress 1st session (1939).

FALL RIVER DAM RECORD

The great flood producing rain of July 1951 fell mostly in the Kaw, Marias des Cygnes, and Neosho Valleys. A less amount fell in the Fall River watershed, and if the Fall River Dam had not been built, the Fall River Valley flood would have amounted to only about 40,000 cubic feet per second maximum, below the dam site.

Furthermore, the Fall River Reservoir can control about an 8-inch runoff, whereas the Toronto Dam can control only a 4-inch runoff.

The portion of the Verdigris Valley involved by the 4 reservoirs extends from about 10 miles southwest of Emporia, Kans., to Nowata, Okla., and contains 4,003 square miles.



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If the cost for the 4 reservoirs, $68,199,500, were divided equally over all the area, there would be $17,034 to spend on each square mile, for flood protection and water supplies.

Other sites available

The upper Verdigris Valley is hilly, and has many sites available for water storage and flood-control structures. Any flood-control funds provided by the general public should be spent first at the headwaters, to give benefits to both the upper and lower portions of the valley.

Prepared May 8, 1953, Eureka, Kans., Chamber of Commerce Flood Control Committee.

STATEMENT OF HOWARD K. WOODBURY, OF OLIVET, KANS., REPRESENTING THE UPPER MARIAS DES CYGNES VALLEY WATERSHED ASSOCIATION

Mr. WOODBURY. Mr. Chairman, members of the committee, I am Howard K. Woodbury, of Olivet, Kans. I represent the Upper Marias des Cygnes Valley Watershed Association. We are heartily in accord with the soil conservation program and hope that it can be handled through the Department of Agriculture in preference to the Army Engineers' plan.

I came from the same territory as Mr. Farmer just mentioned, the Flint Hills area of Kansas. We have thousands of places where we can store water temporarily on grasslands without destroying any farm land or homes, and also this grassland forms a good place for runoff to go into retention dams because it stops the silt.

We have a few small retention dams built privately in years past. I might mention one of my own on a 20-acre runoff. I have a 6⅝-inch oil casing through this dam that was built mainly to protect my fields. I had a retention ditch below the field but the water from the 20 acres would overflow the diversion ditch and go across my field, until I put in the small dam to control the water. The pipe reduces the flow down to where the diversion ditch has been satisfactory and I have had no flood on that field since that time. When we can do it on 20 acres, I would like to see it tried on larger areas.

On my sister's pasture there is an acrea where it drains 960 acres, all grassland. We are in the process of getting a retention dam built on that this summer, where we can have a demonstration plot for what can be done on grassland runoff. That is to be financed mainly through the PMA as a special Kansas demonstration project.

We would be glad to be able to show that to any members any time they can get into Kansas for that purpose. That is the type of project that we are interested in, to hold the water where it falls, and especially on the grassland, where it can stay for 72 hours without damaging our grass enough to be of any financial loss.

I think I am safe in saying that among the soil-conservation cooperatives in our district there are from 60 to 90 percent in several of the local areas that are already signed up with terraces completed. Those are the sites that we would like to see retention dams put in on, to control the water where it already has the treatment or sod to protect the silting. From there on down I think the benefited district or the Federal Government should take over and help us to build those retention dams. The farmers and cattlemen of our territory are not as financially able to go ahead with the terracing as they were

a year or two ago. I do think they are conscious of the benefits of it and will do all that they are possibly able to as fast as they can.

Mr. HILL. Are there any questions?

Mr. POAGE. Mr. Chairman, I would like to ask the witness a question. He said in view of the local and Federal benefits, someone ought to do some of these things. Which do you think ought to do the work, the Federal Government or the local people?

Mr. WOODBURY. I think the local interests below should have a portion in it. That has not been so much the history of it in the past. In my experience a lot of the people who are asking for the Pick–Sloan plan are the ones who will gain the benefit from it without any additional cost above the people who are back on the hills who do not have a chance to gain any benefit from it.

Mr. POAGE. I think you are right. I think many who will have an opportunity to get money from the Government without making any contribution of their own, are going to seek to get it with little regard to the benefits that are to be derived from the program. That goes for Kansas or Texas or anywhere else.

Mr. WOODBURY. That is right.

Mr. POAGE. Are you familiar with the approach that has been suggested by a number of the members of this committee—our chairman has a bill to that effect and there are others that propose the same thing, and the committee did report it favorably last year—the approach that requires the creation of local districts with Federal aid to those districts to carry on flood-prevention work. Are you familiar with that?

Mr. WOODBURY. Yes; I am.

Mr. POAGE. Do you think that is the proper approach to the problem?

Mr. WOODBURY. I do think it ought to be on the cost-benefit basis, and the people who are gaining the benefit should share the cost of it.

Mr. POAGE. When you say "the cost-benefit basis," I think you cover a good deal of territory because after all the man on whose land this water stops isn't the only man who will benefit from a conservation program. The man who lives 300 miles downstream is an indirect beneficiary, too. The city which depends upon it for its city water supply may be a beneficiary. The industries that are dependent on this water at great distances may be beneficiaries.

I do not think that we can ever directly apportion the benefits of flood prevention and flood control to an exact nicety as to everybody in the United States who gets benefits. Don't you think that we are going to have to say that the local people get certain obvious benefits, and that they must pay at least some share of this cost, and that the Nation as a whole gets certain obvious benefits from every one of these programs and that the country as a whole should make some contribution to the program?

Mr. WOODBURY. I realize that. I think it would be hard to say just how far the benefits go, but on the other hand if they put in enough of these retention dams eventually it will benefit everyone.

Mr. POAGE. Of course it will. Every dam benefits everybody. My point is that a highway from Kansas City to Topeka, for instance, benefits primarily the people of Kansas. But the people of Missouri get a great deal of benefit out of it and when I want to drive up there

from Texas, I get benefit out of it, and every citizen in the United States gets benefits from it.

Consequently the Federal Government in our road program has contributed to highways in every part of the United States on the theory that it is beneficial to all of us to have a great national system of highways.

What we require is the localities to put up a substantial part of the cost of those roads because obviously the road that I refer to will be of more benefit to people in Kansas than it will be to people in South Dakota.

Shouldn't we apply some of the same principles to this flood-prevention programs?

Mr. WOODBURY. Yes; I think we should. The road system was started under Federal benefit districts, and later changed to Federal projects.

Mr. POAGE. The road system isn't a Federal project in the sense that the Federal Government builds roads. The Federal Government does not build roads anywhere. The highway commission of Kansas or Texas, or any State, carries on the construction of those roads. The Federal Government simply lays out the general broad outline of the type of structure that must be built to qualify for Federal aid, and then turns over a predetermined proportion of the cost which is ordinarily 50 percent to the States, the States build the roads.

The legislation that I am talking about for the flood prevention contemplates exactly the same sort of thing, in the local districts. The locally created districts should handle the funds and do the work, but that they should receive help from the Federal Government, and they would not receive help unless they met the specifications of quality of construction that the Federal Government lays down through the Soil Conservation Service.

Mr. WOODBURY. That is the purpose of our pending legislation, to create the conservation districts and enable them to cooperate with the Federal Government for that purpose.

Mr. POAGE. You may be speaking of some other bill.

The CHAIRMAN. I think he is referring to the watershed bill which the Kansas Legislature passed in order to cooperate with the Federal Government under your bill or my bill.

Mr. POAGE. The State legislature must pass legislation. I see that.

Mr. WOODBURY. That has been passed, but doesn't go into effect until July. Due to the fact that the retention dams will help store the water underground, it will last us longer and do more people more good by keeping the streams flowing in months that they are ordinarily dry, I do favor the retention dam over letting the water accumulate in one big spot and then be fed down as city water.

If we have all of our streams running a small amount from the ground-water table it will do everybody more good. At the present time we have pastures in Chase County where they are too dry to be safe to guarantee water for the summer, and naturally we are not able to use it as pasture.

Mr. POAGE. I would like to say to this witness and to the other witnesses from Kansas: Your distinguished Representative, our chairman on this committee has been interested in exactly this thing for a

long time. He served on a subcommittee last year and the year before that worked on this same program, and we did go to Kansas, Oklahoma, Texas, and Colorado. Mr. Hope has taken a leading part in the effort to try to keep the water in the ground, as close to the point where it falls as possible, and he has been very helpful all the way through. I think the people of Kansas ought to know it.

I trust you appreciate what he has done.

Mr. WOODBURY. We have heard it and we do appreciate it very much, and we are proud of the privilege to appear here in support of Mr. Hope's bill. In fact, that is what we would like to see go through, to help all the States instead of a favored few that might want the big dams at the expense of everyone.

The CHAIRMAN. I might say to Mr. Poage that some of these gentlemen attended the hearings in Topeka. Were you there, Mr. Woodbury?

Mr. WOODBURY. I was. There were a great number of people from our territory that were up there, and they appreciated the chance to attend that very much. If there are no further questions, I thank you.

The CHAIRMAN. Are there any further questions? If not, we thank you very much, Mr. Woodbury.

The next witness will be Mr. Walter G. Bryant.

STATEMENT OF WALTER G. BRYANT, TREASURER, KANSAS WATERSHED ASSOCIATION

Mr. BRYANT. Mr. Chairman, gentlemen of the committee, my name is Walter Bryant. I represent three groups here today. First, the Congress of Industrial Organizations, which I will not elaborate too much on, due to the fact that the secretary of our soil conservation and regional development, Mr. Smith, covered that fairly well this morning at the beginning of the hearing.

I would like to say also that I am treasurer of the Kansas Watershed Association, which is an organization to coordinate all of the watershed districts in the State, and to also act as liaison between the groups in our State and Federal Government and assist in the organization of these watershed groups.

I could elaborate at length on that but it is mostly covered through our local groups. They are all handled practically alike. In order to save time, I will drop down to the last group, which sent me here, which are the citizens of Topeka.

We have had considerable controversy here on taxation and the cost of building watershed treatment, retention dams, and I would like to bring to your attention a project in Topeka, which is completed on the Shunganunga by 1948. This stream overflowed down through the city of Topeka, causing considerable damage. From the time that that flood happened until some action was taken it was practically forgotten to the extent the public was concerned, and an attempt was made to float a bond issue to build retention dams in this watershed.

The bond issue failed. In 1951, the stream did not overflow but it brought back to the attention of the people in this watershed what happened in 1945. In August 1951 we passed a bond issue in our

local drainage districts in the city of Topeka to build check dams in the upper Shunganunga watershed.

The total bond issue voted was $167,000. An immediate start was made on these dams and 5 or 6 months later it was feared, due to the increased cost in construction and expenses, that we would run short, so another bond issue was voted on and it carried by a large majority an additional $100,000 to complete this project.

That was in the drainage area which started at the west city limits of Topeka and ran down through the city as far as the flood damage was in 1945.

Since that time we have completed these 2 retention dams and the total watershed is 22 square miles above these dams. They have been built to handle the flood in 1945 with precautions being taken for additional overflow.

The exact figures I do not have in my mind but which I have available. That goes to point up the question that was raised earlier this morning that the people in our cities are more conscious of the fact of what our watershed treatment means. They feel definitely that if the water is held a certain length of time on our watersheds to allow the fall of water on the main-stem streams to flow onward and retard the progress of the water as it comes down, that it will eliminate to a very great percent any danger of a major flood.

I do not know that I can elaborate much more on that; I did want to bring the point to your attention that through the cooperation of our local drainage boards, soil conservation, and our watershed treatment, I believe we are going to have a lot better success due to the fact that the controversy over the big dam and the soil conservation has made the public more conscious of the fact than it has ever been in the past.

I certainly feel that we will progress greatly in the future. It is also being shown in our State and even in our school systems. It is proposed to set up next year in all of our public schools studies on soil conservation and watershed treatment, which is a move I feel should have started a long time ago. Had we taught our youngsters, you and I, the program that is facing us today, we would not have had to be here. I thank you.

The CHAIRMAN. Do I understand you to say you are president of the Kansas Watershed Association?

Mr. BRYANT. Treasurer of the Kansas Watershed Association.

The CHAIRMAN. How many watersheds are now represented in the organization?

Mr. BRYANT. The total I could not give you, Mr. Hope. They have covered the entire State. I am advised there are 16 major watersheds.

The CHAIRMAN. Sixteen major watersheds are represented in your organization?

Mr. BRYANT. Yes, sir.

The CHAIRMAN. Your organization sponsored and suported the watershed legislation which passed the Kansas Legislature this session?

Mr. BRYANT. Yes, sir. In cooperation with the State chamber of commerce and the Kansas Watershed Association, we were able to get a bill presented to the Kansas legislators. I might add that it is not exactly perhaps what we need, but we all realize that we cannot get what we want first, that we have to take what we get.

The CHAIRMAN. You feel that it is quite a step forward, however, in securing this legislation?

Mr. BRYANT. I certainly do. Also, we are in full support of your bill.

The CHAIRMAN. Are there any further questions? If not, we thank you very much, Mr. Bryant.

Mr. BRYANT. I thank you very much.

The CHAIRMAN. Our time is up, but unless we have a quorum call and if the members are willing to stay we will go ahead for a while longer. We have one more witness, Mr. Glen Stockwell.

STATEMENT OF GLEN STOCKWELL, OF RANDALL, KANS., VICE PRESIDENT OF THE DREW RIVER WATERSHED ASSOCIATION OF KANSAS

Mr. STOCKWELL. Mr. Chairman, my name is Glen D. Stockwell, of Randall, Kans. I am vice president of the Drew River Watershed Association of Kansas. I have a statement which I will read hurriedly because I know the time is short.

I am glad to appear before this committee as a working farmer to present some ideas on soil and water problems of our Nation. As a boy I was taught to respect our land and to preserve it as capital. Waste of soil was impressed upon me by my father as being worse than the waste of capital. I have often pondered upon the reasons that so many farms are wasting away. Is it because of ignorance? Do farmers waste their soil because they do not know better? I do not think this is the case in my area. I do not believe any farmer would deliberately destroy his farm. Is it then a lack of financial ability? This is partly but not wholly the cause.

We did not see a very great increase in soil conservation practices during the period of high prices that just passed. What then is retarding soil conservation and causing a farmer to waste his soil? First is a lack of stability in economic conditions. With reoccurring fluctuations in price levels, a farmer tends to skin his farm to take advantage of high-price periods and then has to skin it again to keep alive during low-price periods. With a greater economic stability he would be able to plan out a long-range program for his farm.

In an endeavor to secure a stability of life on the farm there has developed in the Middle West what is called balanced farming programs. The farm and family living are planned together toward a better life. The plan is designed to build up the farm production and the standard of living of the farmer himself. This creates a sense of pride of achievement, personal achievement, and creates a sense of personal responsibility of the individual for the soil. The present generation of young farmers who are receiving vocational agricultural schooling in our high schools are also achieving this sense of responsibility.

This pride of individual achievement and responsibility is lacking in present Federal soil conservation programs. Too much stress is laid on the responsibility of society to protect the soil for future generations. The responsibility should rest more on the man who tills the soil. Any program of Federal participation through subsidy payments should take into consideration the weakening of individual

responsibility that might result from such programs. But even as I point out that the primary responsibility should rest with the individual, yet I wish to point out that society should not create situations whereby it is impossible for the individual to meet his responsibilities.

When we proceed from soil conservation into the other aspects of surface water control—and in my section soil erosion is mainly a question of surface water control—we soon find community problems facing us.

Water is no respector of property lines. What my neighbors do on their farms affects me very much. There is a definite neighborhood or community aspect in surface water control. In Kansas we have recognized this community aspect and have attempted to solve it in several ways. Sometimes a small group of farmers will have attempted to solve it in several ways. Sometimes a small group of farmers will work together and volve a problem by mutual agreements. In other cases we have been able to secure cooperation of the SCS and PMA in planning and working out a neighborhood water problem. The recent session of the Kansas legislature recognized the importance of community interest and enacted a watershed district law that will permit the citizens of a watershed to form a municipality with powers to develop and construct programs on a local basis with either local funds or in cooperation with Federal agencies.

We would like to see Federal legislation enacted that would allow the Secretary of Agriculture, acting through the SCS, to cooperate with these local watershed districts and assume the Federal responsibility. I feel that this legislation must be flexible enough to allow the program to fit local conditions yet at the same time Congress should set up standards of performance to assure the development of individual and community responsibilities.

We have areas of community interest in schools, in police protection, in road and highway construction and various civic problems. Now we need a method of crystallizing community interest in land and water management. I believe that this can be achieved through small watershed groups that have a clear-cut interest in the community water problems. Until a community can agree on what are its common problems, any watershed program will be a failure. Federal programs should be developed to stress individual and community responsibilities as being more important than Federal.

I might add that I was a member of the joint steering committee of the Kansas Watershed Association and the Kansas Chamber of Commerce that developed the Kansas watershed bill. We had the assistance of different agencies, the University of Kansas, doing research on the State legislation.

We prepared an outline of what we thought would be good legislation. We held a series of hearings in Kansas and presented it to the people. The committee had the preconceived idea perhaps the way the people would want to finance this would be on a benefit district. But we were surprised when we came before the public to find that they had a broader viewpoint than the committee. They were beginning to see it as a community interest.

Most communities expressed themselves as willing to finance the thing on a general ad valorem tax instead of a benefit tax. Many

pointed out to us that it would be very difficult to determine the exact areas benefited while they knew that the whole community would benefit in a general way.

I might say in reply to a question asked by the committee that this law provides the power to tax both on a general ad valorem basis or on a general benefit district basis. The board of directors will have the determination of whether a project consists of local benefits or of general benefit to an area, or a combination. The district will have power of condemnation and overriding sovereignty over other public bodies in order to see that these projects will be installed.

On the land-use problem of soil conservation where it depends on the farmer, we could not see any way of forcing a farmer to farm his land in the land-use program. But we did put in the law the right of eminent domain that can be applied for structures to be built.

On the whole we have worked out a bill that will be utilized by the citizens of Kansas in order to plan their work, to pay what they feel is a community responsibility, and to cooperate with the Federal Government in the program. I thank you.

The CHAIRMAN. Under that bill you feel that the State of Kansas, or any State having similar legislation, can cooperate fully under the legislation which this committee is considering for Federal aid to watershed projects?

Mr. STOCKWELL. Yes. We include definitely in our bill that we can cooperate with the Federal agency.

The CHAIRMAN. You have full authority in the watershed to carry out its part of the program and cooperate with the Federal Government?

Mr. STOCKWELL. Yes, sir; and in order to prevent overlapping or duplication of work we provide that the local districts should utilize soil conservation techniques and engineers if available.

The CHAIRMAN. Are there any further questions?

Mr. LOVRE. I have one question. I am in complete sympathy with the watershed program. My question relates to the legislation that was passed by the Kansas legislature. In the event that you should have a few unwilling cooperators in the watershed, is the legislation so drafted that you could overcome that obstacle?

Mr. STOCKWELL. As far as placing a structure on that land. The land-use practices in Kansas are included in our soil conservation district law, which has a land-use ordinance. We did not want to bring that section of the legislation into our watershed district law. That is the land-use ordinance. We have the right of eminent domain and we can go in and put in a detention dam, or structure on that land.

Mr. LOVRE. The success of the watershed program depends on the willingness of the farmers to cooperate in the program. If you should have 1, 2, or 3 who would be unwilling to cooperate, that could cause a little trouble. I was wondering if you could overcome that by the legislation that was passed in Kansas?

Mr. STOCKWELL. With that and with the land-use ordinance. The actual work on the farm, you cannot legislate, I do not believe, or force a man and how he will do his farm work. But we can on the farm so far as the detention structures that would be placed on the land.

The CHAIRMAN. If there are no further questions, we thank you very much, Mr. Stockwell, for your statement. We thank all of you for being here this morning.

(The following statement was submitted to the committee:)

MAY 11, 1953.

HON. CLIFFORD HOPE,
Committee on Agriculture, House of Representatives,
Washington, D. C.

DEAR SIR: As treasurer of the Upper Marais des Cygnes Watershed Association and as a representative of the Burlingame Chamber of Commerce and also as a resident of the Switzler Creek Watershed, I wish to enter my wholehearted approval of H. R. 4877.

As a business and professional man living in the proposed Switzler Creek Watershed area, which is one of the proposed watersheds for demonstration purposes, I believe the businessmen and farmers living in that area will be willing to cooperate and if necessary, contribute financially or otherwise to the project. Those farmers to whom I have talked are almost unanimous in stating that they are willing to cooperate to the fullest extent on said project.

It is also my belief that if a project such as Switzler Creek is completed it will make an excellent demonstration project so that residents in other watershed areas will be willing to enter into the same sort of watershed treatment.

I would also at this time like to go on record as opposing the so-called big dam treatment for flood control as being the only method which will be effective. In our grassland areas we feel we can contribute greatly to flood problems by watershed treatment at a low cost and with minimum damage.

Respectfully submitted.

GEORGE E. RAMSKILL.

BURLINGAME, KANS.

The CHAIRMAN. The committee will adjourn until 10 o'clock tomorrow morning.

(Whereupon, at 12:15 p. m., the committee adjourned, to reconvene at 10 a. m., Tuesday, May 12, 1953.)

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